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# SEVENTH REPORT

REMOTE STORAGE

OF THE

# SHELL FISH COMMISSION

OF

# MARYLAND

1914 and 1915

PRESS OF
KOHN & POLLOCK, INC.
BALTIMORE, MD.

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BALTIMORE, MD., January 11th, 1916.

*To His Excellency, Emerson C. Harrington, Governor of the State of Maryland, and Members of the General Assembly of Maryland of* 1916:

In accordance with the requirements of Section 119 of Chapter 711 of the Acts of 1906, the Board of Shell Fish Commissioners respectfully submits its seventh report.

BENJAMIN K. GREEN, *Chairman;*
FRANK S. REVELL, *Treasurer;*
WILLIAM H. MALTBIE, *Secretary.*

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# REPORT OF THE BOARD OF SHELL FISH COMMISSIONERS OF MARYLAND

It is impossible to understand the present situation of the oyster industry in the State of Maryland without a study of the history of the industry. For the purposes of this discussion the history of the industry may be divided into four periods, the divisions between these periods being marked by the passage in 1906 of the so-called Haman Bill providing for a survey and a system of leasing under general State supervision; the passage in 1912 of the so-called Price-Campbell Bill extending the privileges of lessees, and the passage in 1914 of the so-called Shepherd Bill providing for resurveys and the condemnation of existing leases.

At the beginning of the first period there was, of course, no legislation whatever upon the subject of oyster culture in Maryland, but so far back as the earliest Code (1860) a considerable body of law had been developed intended to prevent the depletion of the beds by the use of scoops and drags, or the taking of oysters by non-residents of the State, or the use of oysters from certain beds for fertilizer or lime-making.

At this time also the practice of bedding oysters had obtained sufficient importance to be recognized in the Code, which gave to any citizen the right to bed oysters on any land below water included within the lines of the abutting property owned by him or on land under creeks, coves or inlets not exceeding 100 yards in width at the mouth; or, if the citizen owned property abutting on the waters of the State, he might locate and appropriate an area not exceeding one acre in extent, provided only that it was properly marked and described and the location and description recorded, and provided further, that his action in so locating the property should not interfere with navigation or trespass upon the property owned by private parties or held by private parties in coves less than 100 yards in width at the mouth.

It is worth while noting that in this earlier period there was nothing in the law to prevent a man taking up one acre of natural bar.

Between 1860 and 1906, the close of the first period, several important developments of the oyster industry are reflected in the legislation enacted. The first of these is the growing fear of the oystermen and the general public of the destruction of the industry by the depletion of the beds. It is not necessary to discuss this phase of the question in detail. The passage by the State of more and more rigorous cull laws restricting the size of the oysters that might be taken; the requirements that culled shells should be returned to the beds from which they were taken; the requirements that oysters should be culled on the natural bar as taken, and that all empty shells and all oysters below the legal size should be included in such culling and replaced on the natural bar; the close limitations as to the time within which oysters might be taken, including the prohibition of night work; the limitation of the use of the scoop or dredge to certain open areas; the prohibition of the use of steam or power for the operation of scoops or dredges; the creation of an important and expensive Oyster Navy, and the prohibition of firearms of a sufficient size to resist such Navy, and the creation of an elaborate system of licensing and numbering public dredging vessels are sufficient indications of the dread of depletion in the minds of those interested in the industry.

A second tendency which is reflected in the legislation of this period is that toward further recognition of the necessity for private control of land suitable for oyster farming. Very early in the industry, as indicated by the legislation in the Code of 1860, thrifty oystermen had discovered that it was possible to remove oysters from the natural bar to a new location without injury, or if the new location was one which supplied a greater amount of food, with actual benefit to the oysters so transplanted. It therefore became the habit of many oystermen, instead of selling the oysters taken by them early in the season or in open weather when the ease of securing them had a tendency to glut the market with a corresponding reduction of price, to deposit oysters taken at this time in sheltered waters, at depths easily workable and with sufficient tidal flow to provide an adequate supply of food. Later in the season, when the best of the year's crop had been gathered

from the natural bars, or in periods of stormy weather when the impossibility of working the more exposed locations had reduced the supply and consequently increased the price, these bedded oysters were taken up and placed on the market.

This practice was not limited to the oystermen alone; the packing houses began to buy in larger quantities than they needed at periods of low price and bedded the oysters until an increase in price made it possible for them to secure an increased profit, or if the location which they had secured for the bedding process was a favorable one they bought small or poor oysters at a low price, bedded them in more favorable waters and took them up not only increased in size of shell but also fattened and improved in quality.

To a certain extent the beds thus appropriated by private uses were then, as today, respected and protected by a sort of mutual agreement; in very much the same way as the present-day crabbers divide the territory on a certain river among themselves and enjoy most of the advantages of private ownership without any of the taxation or other burdens usually incident to title. There was, however, no possibility of legal protection if anyone chose to violate the general agreement to respect these various appropriated areas. We find, therefore, as early as 1860, a legal provision for the appropriation of one acre, which was later increased to five acres; provided, however, that the area was properly staked out, surveyed by some competent surveyor and the location recorded with the Circut Court. With this increase from one to five acres, however, there came a recognition of a distinction between the natural bar and non-natural bar; the right to take up a five-acre lot being expressly conditioned upon the fact that no portion of any natural bed or bar should be thus appropriated, and provisions were made for a court determination, in the case of any dispute, as to the character of the bottom appropriated.

This early legislation shows the influence of three special ideas, which from the beginning have been in the minds of the oystermen and have shaped all subsequent legislation.

The first of these ideas was that the oyster industry should be restricted to citizens of Maryland. The natural oyster bed was regarded as one of the resources of the State, belonging

to the people of the State; its working was a privilege and the exercise of this privilege was rigidly restricted to residents of Maryland. The right to appropriate land for the purpose of bedding oysters was not regarded in any sense as a development of the land so appropriated into a natural oyster bed. The land appropriated was regarded, on the contrary, merely as a storehouse or fattening-pen for oysters taken from the natural beds and its use was a mere incident of the right to work the natural bed and therefore rigidly restricted to citizens of Maryland.

This view of the appropriated land as a mere fattening-pen is further indicated by the fact that on the death of the lessee the land in question did not pass to his heirs or personal representatives, who were allowed merely sufficient time to bring the oysters already planted upon it to maturity, after which time the land again reverted to its original condition. The law is silent as to whether the land was or was not thereafter to be regarded as natural bar, the apparent presumption being that the land would be stripped bare by the lessee or by his personal representatives before reversion to the State.

The second of these ideas was fear of monoply in the oyster business. The actual working oysterman, as a rule, is a man of limited business experience and very limited financial resources. Occasionally, he is able to own and equip a dredge boat, but more frequently he is assisted in this by some one connected with the packing industry, who thus acquires at least a partial control over the disposition of the catch. The necessity of finding a nearby market for their catch (in order to return again to the beds and utilize the weather during which oystering is possible) makes the tongers, who more frequently own their own boat and equipment, and those dredgers who have not been financed by packing interests largely dependent upon the local packing houses or upon larger vessels known as "buy-boats," which cruise among the oyster beds and transport the catch to the larger packing centers. The oystermen, dreading an increase of the packing domination, saw in the right to appropriate bottom for bedding purposes an opportunity for the packing houses to provide for themselves a relatively constant and reliable supply of stock

at a minimum price. A packing house, for example, which could take up sufficient acreage could stock this area with cheap oysters in the late spring or early fall and draw from it, through its own employees working on a daily wage basis, an adequate supply of marketable stock throughout the entire season. The oystermen had visions of themselves reduced to the alternative of abandoning the business or of accepting employment at day's wages from the packing houses, with the constant liability of being dismissed at the whim of the employer. Not unnaturally, they preferred the existing situation, in which they worked as their own masters.

This fear of domination by capital is responsible for the five-acre limit, but from the first this attempted restriction of the area held was unsuccessful. John Smith might hold only five acres, but John Smith's wife took another five, and his brothers and sisters and cousins and aunts took five each (and if his stock of relatives was not sufficient his employees were pressed into service), so that even under the old system contiguous holdings of 30, 40 or 100 acres, under a multitude of names, it is true, but to all intents and purposes by a single individual, were not uncommon.

The third of these ideas was a failure to recognize any necessity or possibility of oyster culture as contrasted with oyster bedding. Oyster bedding consists in putting down upon a given piece of bottom oysters taken from the natural bed or bar with the intention of allowing them to grow or fatten and later taking up the same oysters for market purposes. In theory, at least, the character of the bottom is not changed by this operation, and at the close of it, excepting for those oysters which have died during the period or those which have escaped the dredge or tongs, the ground returns to its natural condition. Oyster culture proper, on the other hand, consists in covering a piece of non-producing bottom with material to which the oyster spat, present at the breeding season in all of the saline waters of the Bay and its tributaries, will cling. This captured spat develops in a period averaging probably about three years into marketable oysters. But from year to year the catch of spat is repeated, so that at the end of the three years the bottom carries not merely

a marketable three-year-old crop but also non-marketable one and two-year-old crops, which if culled and thrown back upon the ground develop in later years into marketable crops. A permanent producing field is thus developed in no way distinguishable from a natural bed, and every acre thus developed becomes an additional source of wealth for the State. This same development takes place where bedded oysters are left upon the ground for more than one season, and since it is impossible in any case to take up all that have been put down, the same process takes place in a modified degree upon grounds used for short-term bedding. This fact, however, has never been generally recognized or admitted by the oystermen, who have insisted, in the face of actual experience and known facts, that oysters could not be grown except upon a natural bar.

There was also feeling on the part of the State as a whole that the oyster business should be compelled in some way to meet the constantly increasing expense of enforcing the regulations designed for its own protection. This is reflected in the various legislative enactments providing for license and inspection charges and the various other forms of tax imposed or attempted to be imposed from time to time.

In spite of all the various protective restrictions that were thrown about the business, the oyster catch, variable from year to year, showed on the whole a tendency to decline. There were always oysters to be had, but they were not always of a superior quality and the price was in consequence frequently so low as to show scant margin of profit to the oystermen. The local business began to suffer also from the competition of other states. Experiments had been made elsewhere in oyster culture. Maryland seed oysters, stripped from the local beds in defiance of the laws and in spite of an expensive but totally inadequate Oyster Navy, had been used to stock barren waters in sister states. Recognizing that the acre of barren bottom turned into an acre of producing oyster ground meant increased revenue to the State in form of rental, increased wealth to the State in the form of additional business and increased employment for the citizens of the State in the form of additional occupation and wages, these sister states

did not restrict the man who desired to engage in the business to any paltry five-acre holding, but allowed him to take up a sufficient amount of ground to make it worth while for a man of business capacity to invest his money in this particular form of development of the State's resources. The result was that the producer in these sister states had at his hand a production area in which he could bring his stock to maturity and from which he could draw at any time during the oyster season an adequate supply of the highest grade, while the Maryland dealer, compelled to rely upon the stock which the natural-rock oystermen were able to offer him at the moment, or upon the limited supply which he could draw from the five-acre bedding plots held by him and his relatives, was not able to guarantee to the consumer a shipment of any particular grade at any particular time. Under these conditions the demand for Maryland stock naturally fell off and the cream of the business, even the cream of the Maryland business, began to go to Virginia or other states.

Under these conditions various methods of protecting and developing the oyster industry of the State were suggested. The advocates of these methods may all be divided for our purposes into two broad groups. The first group ignored or denied the possibility of oyster culture (not including in this term, however, the use of ground for storage or fattening-pens) and looked to the development of the industry by further restrictive legislation, enforcement of existing cull laws, establishment of closed areas to permit their re-stocking by natural processes and recuperation of depleted areas by re-shelling at the expense of the State.

The other group, while admitting the importance of all of these measures, held that it was desirable for the State to foster private oyster culture, and that to that end some system by which bottom suitable for oyster culture might be held either permanently or temporarily in private ownership must be devised by the State. For the most part, this latter group favored a system of leasing at an annual rental and one of the most effective arguments advanced by them was a computation of the revenue which would accrue to the State by the leasing, at moderate rentals, of the bottoms underlying its navigable saline waters.

Any attempt to transfer to private ownership that which has always been regarded as the common property of the public invariably arouses intense opposition and the present case was no exception to the rule. Whether it be true or not, as it has frequently been charged, that the opposition to the measure was fostered and encouraged by those whose financial profit lay in the perpetuation of the existing order, it is certain that a great number of natural-rock oystermen of the State believed, or claimed to believe, that oyster cultivation on barren bottom was an impossibility and that any system of leasing whatever, if it were to be successful, must necessarily include natural rock. This meant to them that they would be forbidden to tong and dredge at will over the areas which they and their fathers before them had worked and which they regarded as belonging to them by God-given right.

The advocates of a leasing system were willing to concede that the natural rocks should remain permanently the property of the natural-rock oystermen. They argued, however, that it was possible to grow oysters upon ground which up to that time had not produced them, and they supported this argument by pointing to actual, practical, commercially successful work of this sort in states to the north, in Virginia, in France, in England and in Japan. They pointed in addition to the local beds which had been developed from absolutely barren bottom by the deposit of cullings and they pointed also to the extension of the boundaries of local beds through the spreading of shells due to the operation of dredges. Whether their educational campaign failed because it was not properly brought before the oystermen themselves or whether it failed because the prejudices and distrust of the oystermen were so deep-seated as to render them unable to consider or at least unwilling to admit the facts presented must remain, of course, a matter of opinion. It is enough for our purpose that the educational campaign failed and that the oystermen remained then, as many of them remain today, fixed in the belief that the cultivation of oysters on barren bottom is an impossibility.

Under the circumstances the advocates of oyster-culture legislation turned to the inland counties for help, secured the support of Western Maryland and Baltimore city by glowing pictures of a great revenue to the State and by coupling up the good-roads proposition with the oyster-leasing proposition, and after repeated fights, in 1906 passed the so-called Haman Bill, providing for a scientific survey of the waters of the State and for a system of leasing those bottoms found after the survey to be barren.

It is always easy, after a system has been in operation for a number of years, to point out the places in which the original plan might have been improved. It does not follow that the one who suggests such improvements would have had the wisdom to see them at the time or would in fact have done anything different from what was done had he himself been in charge. It is with no thought of criticism, therefore, that attention is here called to certain features of the Haman Act which, in the light of subsequent developments, would seem capable of improvement.

The first of these was a failure to include within the bill itself a definition of a natural bar. The Commission which was appointed to make the survey was directed to mark out and indicate by permanent buoys the boundaries of the natural oyster bar of Maryland, but the old dispute between the advocates of oyster culture and the natural-rock oystermen as to what constituted a natural bar was left undetermined. As a matter of fact, bottoms on the Chesapeake Bay may be divided roughly into four classes: (a), those on which oysters have not grown and cannot be made to grow; (b), those upon which oysters have not grown but can be made to grow; (c), those on which oysters have grown (as evidenced by the presence of shells) but which for one reason or another contain now so small a number of oysters as to make the bar unprofitable to work; (d), those on which oysters are growing at the present time in sufficient abundance to make the bar profitable to work. Oystermen generally classify "a" as barren bottom and "b," "c" and "d" as natural bar. Advocates of oyster culture, on the other hand, classify "a," "b" and "c" as barren bottom and "d" as natural bar. The dispute was an old one,

but definitions had been carefully avoided in the past by the Legislature, and the only adjudications of the point had been in some of the lower courts of the State, so that no final pronouncement had been made. The question was undoubtedly left to the Commission, because the attempt to solve it in the Legislature would have precipitated a struggle whose extent and final outcome could not have been foreseen, but the failure to include such a definition in the Act was largely responsible for the later development of a struggle which was perhaps equally as disastrous.

The second of these features was the acceptance by the friends of oyster culture of a large number of restrictive provisions, each of which made it more and more improbable that the early attempts at oyster culture would be successful or that the system would produce the revenue which had been promised the inland counties as the reward for forcing it upon the tidewater counties. The first of these, a concession to the fear of monopoly, restricted leasable areas to ten acres within the territorial limits of the counties and a hundred acres in the open Bay. The second restricted lessees to residents of Maryland and excluded any corporation or joint stock company from any holding of land in the State for oyster planting or cultivation.

The third was the elimination of the provisions giving the lessee the right to work the land rented by him in any manner and at any time he might see fit. Under the law, as enacted and as interpreted by the administrative bodies of the State, it was extremely difficult to secure small oysters for planting purposes, and it was extremely difficult to work the beds once planted because the planter was subject to all of the restrictive regulations devised for the protection of natural bars as to seasons and hours and as to the use of power-vessels, etc.

Oyster culture, other than mere oyster bedding, was in Maryland a new business, and an Act which restricted the experiment to individual capital, forbidding a division of the risk among a corporate group; restricted the areas so that the reward of a successful experimenter was too small to attract individuals of sufficient means to afford to experiment; and hampered the lessee by the requirement that he use anti-

quated or inefficient modes of cultivation established a set of conditions which (added to grave doubts in the minds of many as to whether the State would afford adequate protection to the lessee) rendered any development of planting upon a large scale extremely improbable.

Without the development of planting upon a large scale the revenues which had been promised the inland counties would not be forthcoming, and it would be only a question of time until the support which the inland counties had given to the scheme would be weakened or lost by its apparent failure to produce the promised results.

Another open question in the formulation of the program was decided in what might seem now to be the wrong way, certainly, as events have developed, it has entailed on the State a tremendous expenditure with results of somewhat dubious value. The Commission created by the Act was charged with the duty of determining the nature of the bottom underlying the navigable waters of the State. This determination was solely for the sake of determining the area which was open to lease and the area which was to be withheld from leasing because it came within the adopted definition of a natural bar. Two methods were open, one was to follow the precedent set in previous oyster-leasing laws and permit any citizen of the State to make an application for any particular piece of ground, after the application determine the character of the ground, and if it were found barren issue the lease, which should be conclusive evidence thereafter as to the character of the bottom at the time of the leasing. This, coupled with provisions for proper publication of the application and for appeal from decisions of the Commission, would have safeguarded the natural bars and provided for a gradual survey of the land underlying our saline waters, while the determination in each particular case would have been made at the time the land was transferred from public to private control. It would, however, have necessitated the continued employment of a surveying force and would have left the applicant in doubt in any case as to whether he could or could not secure a given tract of land until the matter had been adjudicated for that individual tract. The State chose the other alternative, how-

ever, and provided for an immediate survey of all of the land underlying the Chesapeake Bay and its tributaries.

There is another fundamental underlying difference between the gradual survey suggested above and the immediate total survey actually ordered. In the method suggested, it would have been incumbent upon the would-be lessee to point out the area which he claimed as barren bottom and submit his claim to the determination of the Commission. In other words, the burden of proof would be placed where it usually belongs, upon the petitioner. In the system actually adopted, however, the Commission was supposed to examine only such ground as was claimed by the oystermen as natural bar and to throw open to lease as barren bottom all of the ground not claimed by the oystermen, together with all ground claimed by them which did not come up to the definition of natural bar as ultimately adopted.

The weaknesses inherent in this system were three: first, the enormous expense entailed upon the State; second, the impracticability of attaching a permanent classification as natural rock to ground which might easily at some future time fall under the classification of barren bottom, or vice versa; third, the danger that all grounds coming within the classification of natural rock might not be claimed by the oystermen.

After the adoption of the legislation in question, the Commission was organized and prepared to undertake the work. It found itself at the very beginning under the necessity of determining the meaning of the term "natural bar." This was the crux of the whole situation and the failure of the Legislature to include the definition in the Act compelled the Commission to shoulder the responsibility of its framing. Seeking for guidance on this point, the Commission found a decision of Judge Goldsborough rendered in a Dorchester County case which, while not ratified by the Court of Appeals, and hence not binding upon the other courts of the State, was not in conflict with any recorded decisions in other courts. The final summing up of the Judge contains the definition: "Land cannot be said to be natural oyster bar or bed merely because oysters are scattered here and there upon it and because if

planted they will readily live and thrive there, but whenever the natural growth is so thick and abundant that the public resort to it for a livelihood, it is a natural oyster bar or bed and comes within the above-quoted restriction in the law and cannot be located or appropriated by any individual."

This definition was a reasonable medium between the extreme view of oystermen who held that no ground should be open to lease where oysters were then or had previously been growing, and the other extreme view of the most pronounced advocates of oyster culture who held that no ground should be excluded from leasing whose yield could be increased by artificial cultivation.

There were, however, for the purposes of a survey, certain weaknesses in the Goldsborough definition, namely, its lack of sufficient definiteness to enable a surveyor to mark out the limits of a natural bar and its reliance upon the history of the bar rather than upon a scientific determination of its present condition. The Goldsborough definition was perfect for the purposes for which it was devised, the determination by oral testimony in open court whether a specific area was included within the natural-bar territory. It was inadequate for the work before the Commission, the determination by a hard-and-fast line upon a chart of the boundary at which natural bar ceased and barren bottom began. For this purpose some modification of the Goldsborough definition was essential. Under it, applied strictly, the Commission could have done nothing more than call in witnesses who would testify as to the extent to which the public had resorted to the given ground. That this was not the intent of the Legislature is evidenced by the fact that the Commission was given no power to compel the attendance of witnesses or even to administer an oath.

The first problem therefore before the Commission was to translate the Goldsborough definition, suited as it was to the courtroom, into a definition suitable for field work. The first step was to define the natural bar as a portion of bottom having at the present time, or giving prospect of giving in the near future, a sufficient growth of oysters upon it to justify the public in resorting to it for a livelihood. The next step was

to determine what constituted a livelihood, or in other words, what gross sum of money must be received during the working season by tonger and dredger, respectively, in order to justify his continuing in the business. With this sum once determined, it becomes necessary to determine the gross catch in oysters necessary to produce this sum of money and this in turn made it necessary to fix upon an average price to be received for the oysters. It was then necessary to determine the number of working days in the oyster season, the length of the working day and the amount of ground covered per hour of the working day. With all of these elements known, a comparatively simple computation is sufficient to show the average number of marketable oysters per square yard of bottom which must be present in order to justify an oysterman in working that particular piece of ground, i. e., to justify the Commission in classifying that particular piece of ground as natural bar.

It is evident that in the determination of these qualities there was a large field for the exercise of the discretion of the Commission and that slight changes in some of these quantities would change the classification of thousands or tens of thousands of acres. The Commission had been directed by the Act under which it was created to resolve all doubts in favor of the natural-rock oystermen. They therefore adopted a low sum for the annual livelihood, a high price for the oysters caught, and governed themselves similarly in the determination of the remaining elements. The best evidence of their fairness to the oystermen is that in all of the attacks which have been made upon their work no question has ever been made as to the fairness of the various figures adopted as a basis for the definition.

It is obviously impracticable to make a detailed examination of the entire area underlying the navigable waters of the Bay and its tributaries. The Act, therefore, provided that each county should furnish the surveying party with a guide or guides familiar with the oyster bottoms of that county and that the Commission should examine and determine the boundaries of the bars pointed out by such guides.

The law did not attempt to fix the method by which the examination should be conducted, leaving all of the details to be developed by the Commission. The method actually adopted was extremely thorough.

The first indication of a natural oyster bed is the presence of shell upon the bottom. This can be readily detected either by soundings or by the use of a drag. The drag selected by the survey consisted of a short chain attached to a relatively light line held in the hands of an experienced operator. A small boat equipped with a chain-drag of this sort, with an adequate supply of small buoys and with apparatus for sounding, was sailed over the area claimed as the natural bar in two sets of parallel courses at right angles to each other, each line extended out to the point where the chain-drag no longer indicated the presence of shell. The boat carried engineers, who located its position every twenty seconds, and at each of these locations a sounding was made and the depth of the water and the character of the bottom recorded. Where the indications from the chain and the soundings were favorable, small numbered buoys were dropped and anchored, the position at which they were anchored being recorded by the engineers. This surveying boat was followed by a tonging boat, which stopped at each of the numbered buoys and covered a definite area of the bottom at that point, recording the number of oysters of marketable size, the number of culls and any indications of a catch of spat. All of these records were then platted upon the map of that particular locality, so that the Commission had before it, when it came to pass judgment, an accurate picture of the condition of the bottom at definite points distributed at frequent intervals over the entire area claimed as natural bar. The Commission would thereupon mark out as natural bar an area including all of the locations which came up to the adopted standard or gave promise of coming up to that standard in the near future.

Considered as a survey of tonging areas, only two possible objections could be urged to this method. The first was that the local oystermen selected by the county might not remember to point out all of the natural oyster beds within the county waters. This, to some extent, was obviated by the

fact that the survey boat was the subject of constant visitation from the local oystermen and that any error on the part of the men selected by the counties was apt to be corrected by local visitors. As a matter of fact, the cases of such omission, when actually existing, were relatively small and unimportant.

The second objection was that the results of the investigation determined the character of the ground only for the time of examination and a moderately short interval thereafter. Granted that natural rock might become barren (an assumption established as fact by any piece of depleted bottom examined) or that barren bottom might become natural (an assumption established as fact by every case of new bar established by culling or old bar spread by dredging), it becomes evident that a survey made at one time would produce results which after a relatively short period might be disadvantageous to the natural-rock oystermen or to those interests of the State which expected to profit from leasing revenues.

Viewed, however, as a method of examining dredging bottom, this method had to meet a third objection. Oystermen maintained then, as they maintain now, that on certain types of sandy bottom the oysters are buried in sand to such an extent that nothing but the sharp teeth and heavy drag of a dredge would penetrate to a sufficient depth to capture them. On the other hand, the Commission, seeking as it was to determine the boundary lines of bars, could not well use the dredge, because the results of its use gave merely an average condition throughout the dredge path and did not indicate the exact point at which the bar ceased. For this reason, probably more than any other, the Commission adhered to the method outlined above on both tonging and dredging bottoms.

In order that the interests of the oystermen might be protected the law provided that full copies of the survey in each county should be filed in the county seat, and that citizens dissatisfied with the findings of the survey might take an appeal to the local county court, but limited the right to take this appeal to a relatively short period and declared that after this period for appeal had elapsed the findings of the Commission would be conclusive evidence in all of the courts of the State.

The questionable features of the Act, viewed now in the light of ten years' experience, would seem to be as follows: (a), the provision for an immediate comprehensive survey in advance of the demand for leasing areas; (b), the inclusion of arbitrary restrictions limiting the area taken, forbidding a corporate lessee and restricting the methods used by the planter in cultivation; (c), the attempt to make the survey a permanent determination of the character of the bottom without regard to actual future conditions.

It is perhaps unwise to attempt to fix at this late date the responsibility for these features. It is worth while, however, to call attention to the fact that all of the indications at that time were that the natural beds were shrinking and that therefore the immediate extensive survey, accepted as a permanently conclusive determination of the character of the bottom, promised to operate to the advantage of the natural-rock oystermen rather than to the advantage of the would-be lessee. The contention that features "a" and "c" were concessions to the demands of the natural-rock oystermen is certainly supported therefore by the probabilities of the case. The second feature, "b," restriction of area, of type of lessee, and of methods of operation, was unquestionably a concession to them.

The natural-rock oystermen had, therefore, certainly nothing of which to complain in either the Act or the methods of the survey, excepting possibly the use of tongs to determine the condition of dredging bottom. This one objection or any others which may have been overlooked in the present discussion were cared for by the provision for an appeal to the local court, a tribunal fully cognizant of local conditions and local sentiment, so that after the survey was made, the charts published and the opportunity for appeal allowed to pass, the natural-rock oysterman had no one but himself or his leaders to blame if a single foot of natural bottom was open to lease.

The law, however, did fail to include one provision which might have given a small amount of additional protection to the natural-rock oystermen. The law did not provide that the filing of the charts and the consequent beginning of the period in which appeal might be taken should be advertised in the local press. As a matter of fact, such advertisements were

published in the case of counties whose surveys were first filed. Later on, due perhaps to a change in the Board, there seems to have been a tacit assumption that the filing of the chart in the county court, covering as it did so vital an interest of the community, would be a news item of sufficient importance to be noted in the county journals without putting the State to the expense of advertisement. Even in the counties where this advertisement was not inserted, as in the case of Dorchester, numerous copies of the charts were distributed through the counties, being sent to attorneys, State or county officers, oyster packers, oystermen who had assisted in the survey and village postmasters. Under these conditions the natural-rock oystermen can scarcely be heard to say they did not know the chart had been filed. It is inconceivable that the postmasters in small oystering communities could receive a set of these charts and be so little interested in them that they would not exhibit them to the oystermen in the community. It would also seem inconceivable that men in political life, who had been constantly appealing to the oystermen for their vote, on the ground that they were the champions of the oystermen's rights, could be so little interested that the charts could pass into and out of their offices unnoticed. This contention, however, is one which is actually made and the oystermen in some of these counties, as well as in others where the filing of the charts was actually advertised, have insisted that they had no knowledge of the filing or of their opportunity of appeal until the time for such appeal had elapsed.

The field work of the survey, plotting data secured, preparation of charts and publication of the charts and findings of the Commission occupied the time from 1906 to 1912. As county after county was finished, however, the charts were filed and the bottom within these counties thrown open to lease.

During this six-year period, from 1906 to 1912, a number of leases were issued. A number of small leases were written immediately after the formation of the Commission under a provision of the law which gave holders of five-acre lots under prior acts an opportunity to preserve their holdings under the new system. In 1906, 2,116 acres were leased, including the

five-acre holdings above referred to. In 1907, 564 acres; in 1908, 62 acres; in 1909, 184 acres; in 1910, 236 acres; in 1911, 174 acres. Meanwhile a number of leases were canceled, either for non-payment of rent or because the holder believed it not worth their while to continue under existing conditions, so that on December 31, 1911, there were probably less than 1,000 acres under lease.

The comparative unimportance of the results secured was due to two causes. In the first place, only a portion of the area of the State was open for lease during this time, the final charts not being filed until the spring of 1912. More serious than this, however, was the fact that the restrictions upon the planter written into the Haman Bill by its opponents made planting so unattractive that those who would otherwise have engaged in it did not care to take up land.

In the Legislative session of 1912 a determined fight was made to remove the restriction upon planting and to increase the acreage which a man might take up. As a result of this agitation, the Legislature enacted the Price-Campbell Bill, which increased the possible holdings of a lessee to thirty acres in the tributaries, 100 acres in Tangier Sound and 500 acres in the Bay; permitted the individual lessee to take up his oysters for the purpose of working and transplanting over a longer period, on notice, however, to the captain of the nearest oyster police boat, and also permitted him to handle his oysters with a dredge, without regard to the question as to whether or not his territory was located in tonging area. This Act also provided that the Commissioners should have power to reduce the rentals below the scale adopted in the Haman Bill on all applications filed or leases granted after the 1st of April, 1913. The Act did not, however, permit corporate holdings or the use of power in the cultivation of oyster bottom.

As a result of this Act of 1912, there was an immediate increase in the applications received by the Commissioners and during the year 1912, 994 acres were placed under lease.

During the winter of 1912-1913 the Commission considered the question of a reduction of rental and after consultation with oystermen and with friends of the oyster-culture move-

ment decided to fix the rental at one dollar per acre for the first ten years of the lease and then to adopt a sliding scale, which, at the end of the twenty-year period would bring the rental up to five dollars per acre. This concession acted as a tremendous stimulus, so that by November 30, 1913, 5,666 acres had been placed under lease and leases for 7,483 additional acres had been written and were then outstanding awaiting signature. By the 23rd of February, 1914, these outstanding leases awaiting signature had increased to over 9,529 acres and in addition to this there were upon the books applications not yet adjusted, covering 22,705 acres. Together with the applications for oyster bottom, came serious protests against their granting, practically all of them based upon the claim that the ground which was now being applied for was in fact natural and not barren bottom.

The summer and fall of 1913 found the Commission in rather a peculiar position. The flood of protests which reached it was too great to be ignored. A few were found to be justified by the fact that the local men selected by the County Commissioners had failed to point out to the surveying party natural-rock areas, which had, therefore, entirely escaped examination and been classified as barren bottom open to lease. Other protests were found to rest upon a misapprehension as to the locations of the areas applied for. Others were found to be justified by the fact that there was at the time of protest a marketable crop of oysters upon the ground in question. It was also true that applicants were urging the Commission to make a speedy survey, in order that they might "protect the land" for which they had applied. This meant that there were on this supposedly barren land sufficient oysters to make it worth while for an oysterman to work it, as otherwise there would be nothing in connection with it to protect.

The Commission was therefore forced to the conclusion that while many of the protests were based on errors of location, others based on a false definition of natural bar and still others insincere, there were some which rested upon the failure of the local men to point out all the natural rock and others which rested upon the fact that ground so depleted as to be far below the standard at the time of the survey had in the inter-

vening years caught up so as to be at the time of the protest well above the standards of the Commission. There was, however, under the law no way to remedy even the clearest case of error. The old fear and distrust had fastened upon the State an absolutely inflexible survey. The ground which lay within certain lines on a map might, by a process of dumping, be covered with ten feet of soft mud, but it would remain natural oyster bar under the law until the end of time, while ground outside of those lines, even though it might be definitely shown that it was covered a foot deep with the finest oysters in the Bay, was barren bottom and there was no power in the Commission or in the courts to correct the error.

So far as those cases were concerned in which ground above the standard at the time of the survey had been omitted, whether through neglect of the local man or for any other reason, the oystermen had no just ground for complaint. The charts had been published, the findings of the Board made a matter of public record and opportunity for protest and correction given them. Having allowed this opportunity to pass, they could not, either in law or equity, be heard later to complain of an injustice on the part of the State.

In those cases where the character of the ground had changed, the situation is not so simple. It was, we are told, the demand of the oystermen themselves that the survey should be a fixed and final determination. If this be true, and they had taken this position in order to prevent further shrinkage of the natural-rock area, they should have been prepared to pay the price of a fixed survey and make no complaint in the event of an actual extension of the oyster-bearing land into territory classified as barren by the survey. On the other hand, no one can read the Haman Bill and reach the conclusion that the Legislature ever intended to bring about a condition of affairs under which ground well stocked with natural-rock oysters should pass into the hands of private owners for a merely nominal rental. We are driven irresistibly to the conclusion that in 1906 both parties believed that the natural-rock area was shrinking and that the natural-rock oystermen, or rather their leaders, believed that they were driving a good bargain when they got a fixed survey, and that the advocates

of oyster culture shared this belief but were willing to concede the point for the sake of getting a survey. As the earlier results of the survey began to be made public it was evident that the belief in the shrinking of the beds was more than justified by the facts. The utmost publicity was given these earlier results and the figures showed the most startling contraction of the bars in comparison with earlier surveys and set forth in plain terms the fact that certain well-known bars were about to be wiped off the oyster-producing map. That these were not misstatements of the facts, but the actual presentation of existing conditions, was fairly well demonstrated by the fact that the oystermen filed practically no protests when the charts opening these territories to lease were placed on file.

Then came something which neither side had counted upon, a phenomenal catch of spat and the rehabilitation of the depleted areas. Left to themselves, the leaders of the oystermen might have been sufficiently good sports to stand to their bargain, even though it had turned against them, but the oystermen themselves had never really understood the bargain which had been made for them and even if they had understood it felt in no way bound by it. They therefore began to object when they saw the ground on which they had been oystering in recent years enclosed within the stakes of private owners. Some of the protests thus raised were illustrations of the world-old complaint against the attempt of the State to split up the common for holdings in severalty. Others frankly rested upon the fact that the complainants had not kept sufficiently close track of events to enable them to get in their applications for the best territory, which had consequently been taken by those whom they felt were less entitled to it than themselves. Others rested upon a belief that the spirit, if not the letter of the law, had been violated. Others still were fostered and inspired by more or less sincere leaders, who saw in the movement a chance to further their political or other fortunes.

Legally, the protestants were without a leg to stand upon. The State had deliberately, with their knowledge and consent, by legislative fiat, fixed certain areas as permanently

barren and certain areas as permanently natural bar, with no provision for adjustment to meet future changes. These areas had been marked out and the natural-rock oystermen had allowed the time for appeal to pass without action. The game had been played through to the finish and they had lost. The Board of Shell Fish Commissioners, however, did not feel that it was its duty to ignore scientific facts. Whatever may have been the bargain between the natural-rock oystermen on the one hand and the advocates of oyster culture on the other, the Board of Shell Fish Commissioners was certain that the State as a whole had believed in the possibility of a permanent survey and would have provided, had it foreseen the actual course of events, for the possibility of subsequent correction. It did not believe that the State had ever contemplated that the natural bar, ready to yield an adequate crop, should be turned over to a private owner. For this reason it announced its desire to find a way by which disputed areas could be withheld from leasing temporarily, until the Legislature could be asked to authorize a re-examination of the area in dispute, with a view of correcting the survey and bringing it down to date. In the effort to bring this about, it found a partial solution of the difficulty in the discretion which the Legislature of 1912 had given the Commission as to rentals. The Commission was free to fix a price upon any particular piece of ground, subject only to minimum but not to a maximum limit. It therefore announced that it would grant no leases on protested areas until after re-examination and if this re-examination showed the ground to be stocked with oysters it would then issue a lease, but only upon a rental commensurate with the value of the land. This action was communicated to protestants as early as March, 1913, and to various representatives of the oystermen during April and May of that year.

Meanwhile, the growing discontent of the oystermen themselves resulted in the formation of oystermen's associations in the various tidewater counties of the State, which were later consolidated into a single organization. The Secretary of the Commission immediately communicated with the President of the consolidation, suggesting that he arrange for a meeting of the associations at which a member of the Shell

Fish Commission could present the situation from the Commission's point of view and have in return a frank discussion on the part of the oystermen of their demands. This letter, although sent and received, was never answered, so that the Commission was denied the opportunity of presenting its case to the Oystermen's Association. A little later, however, this Association requested a hearing before the Board of Public Works, which was believed by the oystermen to be more friendly to them than the Commission. The Board of Public Works, though without any authority to deal with the matter, granted a public hearing and received a number of complaints as to specific areas charted as barren bottom and claimed to be at the time of the hearing good productive areas. The Board of Public Works then requested the Board of Shell Fish Commissioners to re-examine protested areas and to use any means which might be within its power to delay until after the session of the Legislature the leasing of any areas found upon examination to be natural bottom. To this request the Board of Shell Fish Commissioners replied that it would do all in its power to meet the wishes of the Board of Public Works. This was merely a statement that the Shell Fish Commission would continue to do what it had already announced as its policy. It was, however, heralded as a concession, which had been forced from an unwilling Commission by an appeal to the Board of Public Works, and was used to influence the natural-rock oystermen against the Commission.

Meanwhile another serious situation was developing. A certain element among the oystermen, declaring their conviction that they would not be punished for their acts, proceeded to destroy the property and steal the oysters of certain lessees. The situation was one which presented considerable difficulty. The Oyster Police Force of the State has been for a generation entirely inadequate for the enforcement of the existing laws and there was no hope of securing from it a sufficiently effective patrol to prevent depredation. The only way in which the property of the lessees and the good name of the State could have been protected would be by aggressive action on the part of the State and County authorities in handling the first case of depredation without gloves. This was not

done and the result was that the lawless element among the oystermen grew bolder than before and the lessees lost heart, feeling that it was worth no man's while to pay rental to the State and expend money upon the development of oyster bottom when the State was either powerless or unwilling (apparently both) to afford him adequate protection from depredation or to punish those responsible when depredation had actually been committed.

An illustration of the condition is given by the sworn statement of Robert H. Spedden. See Exhibit A.

This statement has never, so far as we know, been disputed, although it was given wide publicity during the Legislative session of 1914. It was placed before the Board of Public Works as a complaint with regard to Captain Miles. No reply was ever made to the Shell Fish Commission by the Board of Public Works, but it later developed on inquiry that the Board of Public Works had taken no action except to fail to re-appoint Captain Miles at the end of his term. The men arrested have not yet (December, 1915) been tried.

This was the situation when the Legislature of 1914 convened. The planters were discouraged because they had lost faith in the intent of the State to protect them. The great body of oystermen were in a state of indignation and a lawless minority, encouraged by the failure of the State to enforce its laws, was planning further depredations.

Three separate plans were suggested, one proposed the repeal of all leasing legislation; a second, presented with the approval of the Shell Fish Commission, provided for re-examination and re-classification of any unleased area by the Commission, with further provision for an appeal to the courts in case the Commission's decision was unsatisfactory; a third proposed to shift the power for revision from the Board of Shell Fish Commissioners to the courts and provided for the re-examination not only of unleased areas but of leased areas as well, with a further provision for the condemnation of leased areas by the State if they were found to have been natural rock at the time the lease was executed. Numerous other features, calling for the advertisement of all applications, for the creation of a neutral zone, etc., some good and some bad, were incor-

porated in this third plan. When it was apparent that the bill enacting the third plan was about to pass both the House and the Senate, the Governor called together some of those who were interested in pushing the bill and intimated clearly that he would not sign it unless certain modifications were made. These modifications were then made, the bill was passed and received the Executive's signature and has been upheld as constitutional by the Court of Appeals.

This bill, commonly known as the Shepherd Bill, leaves much of the prior Haman and Price-Campbell bills untouched, but modifies them in certain important particulars.

First—It writes into the law a definition of natural bar.

Second—It establishes a neutral zone around all natural beds or bars.

Third—It provides for a re-examination and re-classification at any time, upon the initiative of the Board of Shell Fish Commissioners, of any land, natural or barren, except leased land.

Fourth—It provides that no land shall be leased until after the application for it has been advertised for thirty days and an additional period of thirty days has passed without the filing of a protest in the Circuit Court. This protest, if filed, is treated as a case at law and the decision rendered by the Court is final and conclusive.

Fifth—It provides for re-classification on the initiative of any three or more residents of the State of any area classed as barren, provided that action was taken before January 1, 1915. This re-classification was to be by the court and not by the Commission, and if the area protested should be found by the Court to be natural bottom, any leased areas included therein were to be condemned by the State and thrown open to general use.

There were other modifications of the original law, but they were of minor importance. The changes above mentioned are the only ones which need further discussion at this time.

### The New Definition

The new definition is an acceptance of the Goldsborough definition as an underlying principle, but restricting its application to a period of five years prior to the date at which the

question is raised. The definition as originally presented to the Legislature turned only upon the use of the ground by the public and provided that any land "whereon the natural growth of oysters is of such abundance that the public has successfully resorted to such beds or bars for livelihood, whether continuously or at intervals, during any oyster season within five years" should be natural bar. Upon the protest of a member of the Commission that this definition excluded from the consideration of the court all evidence, no matter how definite, as to the actual present-day condition of the bottom, an additional clause was added providing for the consideration of the present-day condition.

The difficulties with this definition are the same as those which confronted the Commission when they considered the Goldsborough definition. It is a definition for the courtroom, turning primarily upon the history of the bottom in the past. It is possible under it to determine the general character of large areas, but it is absolutely impossible to fix the boundaries of these areas with any degree of definiteness. Applied, as it must be in practice, to the drawing of a hard-and-fast line, indicating where the natural bar ends and the neutral zone begins, it is absolutely inadequate. Applied to this purpose it becomes palpably absurd, since no one knows the exact boundaries within which his attempts to secure a livelihood were successful; and even if he did know them at the time could not re-locate them after an interval of from three to five years.

The above statement of course is inaccurate in special cases where, for example, the oyster bed extends to a steamer channel, to a 30-foot line, to shore or to a line well marked by objects on land, but applied to the cases which most frequently arise, where such natural boundary lines do not exist, it has proved in actual operation very unsatisfactory. Some of the testimony under it has been grotesque in its indefiniteness and it has been impossible to determine boundaries by the evidence given.

Fortunately for the Commission and for the courts the cases which have actually arisen have been protests against definite areas and the testimony has either been broad enough to

cover more than the entire area named or else the parties to the case have agreed upon a compromise boundary line so that the court has in no case been compelled to fix a boundary between natural bar and barren bottom upon the basis of the testimony alone, the findings being merely that certain definite areas were natural bar; not including, however, the further statement that the adjacent areas were barren.

## The Neutral Zone

The neutral zone provision is, in the opinion of the Commission, a good one, but needs additional interpretation as to its significance. It is evident that a system by which the natural rock and the leased area are immediately contiguous will lead to constant charges of trespassing. If, however, the neutral zone is to be regarded as opened to the natural-rock oystermen and closed to the planter, which is the probable significance of the present law, it means that the planter must either create a second neutral zone, on which he pays the State rental, by failing to plant to the edge of his territory, or else find himself subject to the charge of appropriating the neutral zone to his private benefit. The whole necessity of a neutral zone grows out of the fact that land under water cannot be divided by permanent definite boundaries and that the tonger or dredger cannot practically confine their workings to a definite line. It is desirable, therefore, that there should be between any two tracts of under-water land held under different ownership, whether public and private or both private, an intermediate lane in which both should be permitted to work and which neither should be permitted to cross, and this lane should be sufficiently wide so that a man could work to the full limit of the territory allotted to him without danger of encroaching on the territory allotted to his neighbor. Under the present law, however, the neutral zone is a belt of territory surrounding the natural bar. The natural-bar oysterman may extend his operations to the very outer edge of this new belt territory, while the lessee, unless he is also licensed as a natural-rock oysterman, may not encroach in the slightest upon this neutral territory. The effect of the neutral zone,

therefore, is merely to enlarge the natural bar and leave the same sharp line of demarcation between it and the lessee. To accomplish its purpose it must be either open to both parties or closed to both.

### Re-Examination by the Commission

The provision giving the Shell Fish Commissioners full initiative to make new surveys at any time, coupled with the provisions requiring advertisement of each application and an opportunity for judicial classification, practically wipes out the old survey, on which the State and Federal Government expended $200,000. The old charts and the old boundary lines remain, it is true, but they are subject to change either by throwing new areas open to lease or including new areas within the natural-bar territory at any time, and no area can be leased until the application has been advertised and an opportunity for judicial classification given. As an actual matter of fact any citizen of Maryland may today apply for a lease of any land underlying the waters of the Chesapeake Bay and its tributaries without regard to any previous survey. If it has been previously classified as natural bar the Commission may re-examine it, and if it concludes that it is now depleted, modify the charts and advertise the application. If it is not classified as natural bar the Commission accepts and advertises the application. In every case, therefore, it is possible to submit the question of the character of a desired area to the public of a given county by advertisement and if that public has no objection or if the objection of the public is not sustained by the court to transfer the land to private ownership. It is difficult to say, consequently, that under these conditions the existing survey has anything other than a historic interest.

### Advertising of Applications

The section of the Act requiring advertisement of all applications and providing for a court adjudication of all protests against applications is so drawn as to involve large unnecessary expense upon the State. No provision is made in the

law as to meeting the expense of the advertisement, but as the charges which may be made against the applicant are specifically set forth, the Commission was compelled to meet the advertising charge at its own expense. Moreover, the law provides that if the Commission is unable to execute the lease the application fee paid by the applicant shall be refunded. Still further, the applicant is not made a party to the legal proceedings under which a protest is adjudicated. The result of any applications for ground, later determined to be natural bottom, is then as follows: The applicant sends in an application with a fee of five dollars. After the advertisement is inserted at the expense of the State, legal proceedings are instituted, the bottom determined to be natural bar, the costs assessed against the Commission and the application fee thereupon refunded to the applicant. Every unsuccessful application thus means an expense to the State of from $20 to $25.

### Reclassification by the Courts

No special comment seems necessary upon this in addition to the statement hereafter made as to subsequent proceedings under this section.

### Operation of the Commission Under the Shepherd Bill

After the passage of the Shepherd Bill and the adjournment of the Legislature the Commission was forced to make several decisions as to the plan to be followed by it, in view of the fact that the law left rather wide discretion in the hands of the Commission. The first point that arose was with regard to the advertisement of pending applications. Strictly construed, the law would have demanded the advertising of all pending applications. The Commission knew, however, that in a number of cases the applicants did not desire to continue to follow up the application. In some cases they were convinced that the ground applied for would be successfully protested. In other cases the uncertainty as to the future attitude of the State on the whole question of oyster culture and the failure of the State to furnish adequate protection to exist-

ing lessees had led the applicants to abandon their plans. For these reasons the Commission believed that to advertise the whole group of pending applications would be to entail upon the State a large unnecessary expense. It therefore communicated by circular letter with all persons who had applications pending, asking whether or not they desired the applications advertised. A second similar communication was sent to those who did not respond to the first, and advertisements finally published only in those cases where the applicant so directed. Publication of these advertisements was followed immediately by a large number of protests, the result being tabulated by counties in Exhibit B.

It was evident at once that if these cases were each to be tried and contested separately the total expense for attorneys, court costs and witness fees would be enormous. The Commission therefore suggested to the courts and the attorneys representing the protestants that the hearings be delayed until the Commission could make a re-examination of the bottom so applied for; that after this re-examination it would report frankly to the attorneys for the protestants the results of its re-examination. This proceeding was adopted in a large number of cases, and the Commission's report being that the ground at the present time conformed to the definition of the Shepherd Bill, the court costs and general expenses of the trial were very materially reduced.

The same attitude was taken by the Commission with regard to areas not under lease and not yet applied for but claimed by the oystermen as natural bottom. It was felt that it was better for these to be re-examined under the initiative of the Shell Fish Commission than to have the re-classification of this territory thrown into the courts. The Oystermen's Association thereupon pointed out to the Commission the areas in the open bay which it claimed as natural bottom, and the Commission, on its own initiative, thereupon re-examined so much of this area as it was able to cover during the open season of 1914, the result of this re-examination being set forth in the Engineer's Report, Exhibit D.

Where protests were filed against ground already under lease, the Commission did not feel free to attempt any re-ex-

amination excepting in a single case where the lessee himself requested it. The Commission reached this conclusion because of the fact that its tests rest entirely upon an actual examination of the present-day condition of the bottom and it did not believe that the present-day condition of bottom which had been under private ownership for a period of years, and consequently might or might not have been seeded by the lessees, would be any evidence as to its condition prior to the time the present lessee had applied for it.

## Recommendations of the Commission

Certain features of the law seem to the Commission to call for modification. The first relates to the rental charged against those lessees who took up land prior to April 1, 1913.

In theory, lessees under the former Act had had time to develop their ground and bring it up to a state of productivity which justified the higher rental. It was, we believe, this consideration that led the Legislature to limit the power of the Board to leases written after the given date. As a matter of fact, however, the restrictions upon the taking of oysters from leased ground had rendered operation under the old law largely impracticable and in consequence many of the holders of leases had simply contented themselves with paying the rental and leaving the ground in practically its natural condition. They felt and still feel that there was grave injustice on the part of the State in forcing them to pay a higher rental than those who were starting in under more favorable circumstances. To all such applicants the Board has made but one reply, namely, that it recognized the logic of the situation and would ask the Legislature to grant it power to make such adjustments as justice might demand. The Board accordingly requests that such authority be granted.

The Commission calls attention in the second place to the fact that under the new Act the authority to accept voluntary surrender of leases and to refund the rentals and charges theretofore paid is confined exclusively to those cases where the re-examination and re-classification of the leased area as natural bar has been made on the initiative of the Commission. The

Commission has, however, at least one case on its books of land re-classified as natural bottom by court action, the lessees of which are willing to surrender their rights to the ground so re-classified, provided that the rentals theretofore paid on such ground may be credited to them against rentals thereafter accrued on other lands still held by them as lessees. This case, and possibly some others, would be covered by granting to the Shell Fish Commission the power to accept surrender of leased lands and credit rentals on such lands theretofore paid against rentals then due or thereafter to become due on other land.

The Commission would recommend further that the law with regard to the neutral zone be so modified as either to exclude both the natural-rock oystermen and the lessees from working thereon or so as to make it permissible for either to work thereon. In this latter case the lessee who attempted to stock land beyond his own boundary limits would do so at his own risk and yet would not be liable for appropriation of the public territory nor under necessity of securing an additional license if in planting or working his territory he happened to get a few feet over his line.

If the present system is to be continued, the Commission believes that the expense to the State may be very materially reduced by placing in the hands of the Commission the first examination of ground applied for. It would recommend that on the receipt of an application, accompanied by the proper application fee, the Commission should make an examination and survey of the bottom in question at the expense of the applicant. If the bottom is found to be natural bar the applicant should be so informed and given an opportunity for appeal to the local court. If the bottom is found by the Commission to be barren, the fact of the application and the finding of the Commission should be advertised as at present, with opportunity for protest and court appeal. It is believed that this will very materially decrease the expense of the proceeding, particularly if the Commission adopts the plan of fixing dates in advance for visits to specific territory.

The Commission believes that the State should undertake experimental work in oyster culture, in the production and

propagation of the crab and in other lines relating to the sea-food supplies of the State. It therefore recommends that proper provision should be made by the Legislature for such work.

If, however, the State is to deal effectively with the general oyster situation it must have an adequate police force, with vessels adapted to present-day conditions. Until the State is ready to give more effective protection to the small lessee than it has so far afforded him, oyster culture, unless upon a sufficient scale to justify the lessee in protecting his own property or in a community where no protection is needed, is, in the opinion of this Commission, impracticable.

The Acts of the General Assembly of Maryland of 1906, which created the Shell Fish Commission, prescribed special duties for this Commission in connection with the "oyster industry." The Commission was given no supervision over the important crab industry, although Section 96 of this Act instructed the Board of Shell Fish Commissioners to mark off and chart all bottoms where grass grows and where it is profitable to scrape for soft-shell or shedder crabs.

This Commission has, however, permitted its Engineer to make investigations, from time to time during the past five years, relative to the supply of crabs and the waste in handling them. Extracts from his report are given in Exhibit E.

The Commission believes that it is expedient to call the attention of the General Assembly of Maryland to the importance of passing protective measures for this valuable marine product, and therefore recommends the passage of the following measures:

1. Prohibiting the taking, having in possession or offering for sale by any person or persons within the State of Maryland of any hard-shell crabs under five (5) inches from tip of spike to tip of spike.

2. Prohibiting the taking, having in possession or offering for sale of any female egg-bearing (sponge) crabs by any person or persons within the State of Maryland at any time.

3. Prohibiting the taking of the female soft crabs (known as doublers) by trot-line crabbers during the months of August and September.

4. Requesting the General Assembly of the State of Virginia to co-operate with Maryland in the passage of concurrent legislation for the protection of the crab, in order that this crustacean may be protected throughout the entire Chesapeake basin and further requesting that the State of Virginia pass laws regulating winter dredging for crabs in the vicinity of the Capes, in order that the gravid females, seeking those waters, may be protected.

## EXHIBIT A.

### Statement of Robert H. Spedden, of Sand Gates, St. Mary's County, Maryland, Made December 5, 1913

I fought the bill and did what I could against it from the first and until the time it was signed by the Governor. After it was signed by the Governor and became effective I saw the head surveyor, Mr. Earle, in person and asked him what I must do. I told him my position and he told me I would have to comply with the Haman Act. I told him I wanted protection and that I wanted to be law-abiding, and he told me how to get out my application. I did this and he came there and placed the stakes for me.

I took up ten acres and my brother, J. B. Spedden, took up twenty-five acres. This happened in the spring of 1912. About two acres of the ten-acre plot had at one time produced oysters, but it was completely depleted; oozy bottom, easy to scrape and had been scraped clean. The other eight acres were clean mud. In transplanting from another plot I put all of the unmarketable oysters that I could on this piece of ground, which was a beautiful scatter, I would imagine. These oysters were notable because they grew on rocks and stones and were easy to catch after transplanting. There were about 200 bushels of them and were scattered over the depleted two acres. I planted these oysters every day, or once or twice a week, until Christmas, and I planted one load after Christmas. When I went to make an experiment, after planting all fall, in the spring we could not find any of the oysters that were planted in the fall. Only the last load was intact. The others had been removed, presumably by night scraping. Two men working all day for me did not get over three bushels. On this same tract I planted 700 more bushels on the muddy eight acres and apparently the last time I made an experiment there there were about one-third of them left.

On the plot of J. B. Spedden twenty acres were seeded with 1,100 bushels. The first load was sowed early in the fall. At that time Mr. S. M. Jones and myself went there to test the

ground. We began in the morning and tonged up until the lunch hour and we got about a half-dozen marketable oysters. As I took Mr. Jones ashore to get his lunch I met Mr. C. D. Insley. I asked him if he would go out with me and show me where those oysters were on my brother's plot, as Mr. Insley had been claiming that this ground had a good catch of oysters on it. He tonged there with me until late supper time and we didn't catch over a peck of oysters the whole day. These 1,100 bushels planted on the plot of J. B. Spedden were brought from the Eastern Shore by Captain Wallace, Captain Phillips and Captain Parker and purchased by me for my brother's account and the 700 bushels planted on my own tract were brought from the Potomac River by Captain Lewis and Captain Gatton and purchased by me.

During the summer season of 1913 the Calvert County oystermen made visits to our county and persuaded our people to join an Oystermen's Protective Association and also to contribute to the fund to maintain this Association. I met Mr. Horseman, of Broome's Island, on Sotterley wharf. We were discussing oyster leasing and he asked me: "What would you do if we came up on your ground and went to oystering?" I told him if it was to be one boat for a test case he would be treated as a gentleman and that I would do everything in the world if he was imprisoned to get him out of trouble, because the planters would gladly accept a test case of that kind, but not to come as a raid. He said to me: " . . . if we come we don't know whether we are looking for that kind of treatment or not."

I then went to Hollywood and met several friends of mine on the road who were discussing the oyster question and the meetings that were being held in that neighborhood. I told them that I would accept a test case gladly on the conditions that I have just above stated; so I got a message from them that they were not going to raid my ground, as I had held it over twelve months in peaceful possession and had seeded it, which was sufficient to give me title under the old law. To my surprise, a few days later twenty-nine or thirty boats, all but two from Calvert County, raided my brother's ground and removed, as nearly as I can determine, about 1,000 bushels of oysters.

I was notified of the raid and at once came down to the scene. I got in my launch and went out to the scene immediately. I did not know all of the oystermen, so went up for Capt. Jesse Rider and brought him back with me and we took the names of those we knew. When Captain Rider appeared they went into cabins and in various other ways tried to hide, but we were able to identify nearly all of them. We started to go to Leonardtown to swear out warrants, but in the meantime they followed us on up and raided Captain Rider's beds. We then went through the boats that came up there and took their names. We then went to Leonardtown to swear out the warrants.

The Sheriff reached us late the next evening and by that time the oystermen had seen the State boat "Folly" coming and they had all scattered except six, for whom we happened to have warrants. By this time the "Folly" had arrived and when we went out to the lot with the Sheriff we found Captain Miles, of the "Folly," in his launch going around among the boats.

At this time these men were still working on my brother's bed and Captain Miles knew it to be leased ground and knew that the oysters on it were seeded, but he was making no effort to stop the raid and had not made any arrests. When the Sheriff boarded the first boat Captain Miles brought his launch alongside of the raiding oyster boat and advised the men to go quietly with the Sheriff, remarking that it was only a test case. Captain Rider then said: "Captain Miles is mistaken, Sheriff Dent. We have offered them a test case, but this is robbery." Captain Miles then said: "I'm with you, boys; I'll take care of your boats."

We started back to Sand Gates, after arresting the six, and we could hear the prisoners talking. They said that ——— had a barrel and a half of money and that he would back them.

The men were then taken before the Magistrate and released on bail of $100, although the damage through the destruction of the young growth as well as the marketable oysters represented to me thousands of dollars.

ROBERT H. SPEDDEN.

Test:

*Howard D. Adams.*

STATE OF MARYLAND, CITY OF BALTIMORE, TO WIT:

I hereby certify that on the eighth day of December, in the year nineteen hundred and thirteen, before me the subscriber, a notary public of the State of Maryland, in and for said city, personally appeared the above-named Robert H. Spedden and made oath in due form of law that the matters and facts above set forth are true to the best of his information, knowledge and belief.

Witness my hand and notarial seal:

HOWARD D. ADAMS,
*Notary Public.*

## EXHIBIT B

## APPLICATIONS ADVERTISED TO DECEMBER 31, 1915, PROTESTS FILED AND FINAL DISPOSITION OF CASES

| County | Advertised | Cancelled | Limit Not Expired | Not Protested | Protested | Natural Bottom | Barren Bottom | Compromised | Protest Pending |
|---|---|---|---|---|---|---|---|---|---|
| Anne Arundel | 47 | 1 | 4 | 27 | 15 | 6 | 3 | 3 | 3 |
| Calvert | 25 | .. | 1 | 16 | 8 | 5 | 2 | .. | 1 |
| Charles | 6 | .. | .. | 4 | 2 | 2 | .. | .. | .. |
| Dorchester | 90 | .. | .. | 34 | 56 | 39 | 2 | .. | 15 |
| Kent | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Queen Anne's | 13 | .. | .. | .. | 13 | .. | .. | .. | 13 |
| St. Mary's | 29 | .. | 2 | 23 | 4 | 3 | .. | .. | 1 |
| Somerset | 27 | .. | .. | 16 | 11 | 9 | .. | .. | 2 |
| Talbot | 56 | .. | 1 | 20 | 35 | 33 | .. | .. | 2 |
| Wicomico | 23 | .. | .. | 23 | .. | .. | .. | .. | .. |
| Totals | 317 | 1 | 8 | 163 | 145 | 97 | 7 | 3 | 38 |

## EXHIBIT C

### PROTESTS FILED AGAINST EXISTING LEASES AND FINAL DISPOSITION OF CASES TO DECEMBER 31, 1915

| County | Protested | Natural Bottom | Barren Bottom | Compromised | Pending |
|---|---|---|---|---|---|
| Anne Arundel | 3 | .. | .. | 3 | .. |
| Calvert | 17 | 12 | 2 | 3 | .. |
| Charles | 3 | .. | .. | .. | 3 |
| Dorchester | .. | .. | .. | .. | .. |
| Kent | .. | .. | .. | .. | .. |
| Queen Anne's | 14 | 7 | .. | .. | 7 |
| St. Mary's | 40 | 38 | .. | .. | 2 |
| Somerset | .. | .. | .. | .. | .. |
| Talbot | 12 | 10 | .. | 2 | .. |
| Wicomico | .. | .. | .. | .. | .. |
| Totals | 89 | 67 | 2 | 8 | 12 |

## EXHIBIT D

## REPORT OF ENGINEERING DEPARTMENT

BALTIMORE, MARYLAND, December 15, 1915.

*To the Honorable,*
*Board of Shell Fish Commissioners,*
*Baltimore, Maryland.*

GENTLEMEN:

I respectfully submit the following report covering the work of my division, under your Board, for the years 1914 and 1915:

After the passage of the Shepherd Act by the General Assembly of Maryland and in compliance with same and your instructions of May 13, 1914, 106 applications were prepared for advertisement in local papers at once, and others were prepared from time to time as the applicants complied with your notice.

At a meeting of your Board on the 27th day of May, 1914, you decided to ask the Board of Public Works for the use of the State steamer "Governor R. M. McLane," for the purpose of making the examinations of large protested areas located on the easterly and westerly sides of Chesapeake Bay, Patuxent, Choptank, Honga, Manokin and Big Annemessex Rivers, Eastern and Fishing Bays, Tangier Sound, and Hooper and Kedges Straits.

The engineer was instructed to secure the services of Mr. H. E. Collins as assistant engineer and arrange to start work June 10th.

A dredging schooner with three men and equipped for work with gasoline yawl, to be used in making the examination, was also arranged for.

Mr. Benjamin K. Green, Chairman of the Commission, arranged to devote the entire season to the re-examination work, and take charge of the work on board the dredge boat. The other Commissioners were to be present as often as possible and when needed.

The steamer "Governor McLane" was turned over to the Shell Fish Commission and placed in commission on June 10th, and at once was made ready for the work.

June 15th, the field work on the bay shore adjacent to Calvert County was started.

A number of the original stations erected by the United States Coast and Geodetic Survey in 1908, were found to be destroyed and these had to be re-established. The class of work, being different from the methods of examination used on the original surveys, required some days to perfect in order to get green crews broken in.

Some of the protested areas to be re-examined covered several thousand acres and these had to be sub-divided in areas of from 100 to 150 acres. Temporary flag buoys were used for this purpose and the steamer or launch (according to depth of water) was manoeuvered to mark the sections before the dredge boat started to work. The schooner "John Martin" was commanded by Captain Tal Mister, an experienced dredger; and was equipped with two dredges, power yawl and gasoline winders.

When the dredge boat started on a section, as marked out by the engineers, her time was taken (which was one-half hour to section). Two dredges were used when the wind was sufficiently strong for the schooner to pull them, but this was seldom; most of the time it was necessary to assist the schooner with the gasoline yawl. By this means we were able to work in calm weather. The westerly side of the bay adjacent to Calvert and St. Mary's counties was completed by July 15, 1914. Arrangements were then made to start re-examination work in the waters of Somerset County and the steamer took on coal and provisions in Baltimore and buoys and stone anchors at the buoy station in Miles River.

Examination work was started in the vicinity of Kedges Straits, Somerset County, July 21st; and the balance of the month was spent in Tangier Sound and tributaries.

Re-examination in the Choptank River, Dorchester and Talbot counties was started August 4th, and completed August 28th. A smaller and lighter dredging schooner, the "Nannie Gertrude," replaced the schooner "John Martin" and was used the balance of the season. The work in this locality included areas around Sharps Island and as far south as Hill's Point.

The work in the vicinity of Honga River, Hoopers Straits, Fishing Bay and Upper Tangier Sound was started after the work in Choptank River, and completed October 10th. While this work was in progress, trouble broke out in Manokin River over the Cox

oyster lots, off Cormal Natural Oyster Bar. The Commissioners were called into conference with the Board of Public Works and the replacing of the buoys was decided necessary.

The Commission's Engineer was directed to do the work under the protection of the commander of the State Oyster Navy. After this work was done the buoys were again destroyed and had to be replaced.

This unexpected trouble caused some delay in the examination work.

Assistant Engineer Collins resigned August 31, 1914, and J. Weldon Green was appointed to fill the vacancy September 1, 1914.

Between October 12th and 15th re-examination work was carried on in Eastern Bay and on the latter date the use of the dredge boat was discontinued.

The assistant engineer was then sent to Tyaskin, Wicomico County, where the launch "Investigator" was placed in commission and oyster-lot work in the Nanticoke River and Pocomoke Sound was carried on until December 1, 1914.

Commissioner Green and Engineer Earle used the steamer "Governor McLane" in the Patuxent River until November 1, 1914, in making re-examinations and surveying oyster lots.

The area of bottoms re-examined during the season 1914 and found to be up to the standard of natural oyster bars are classified as follows:

Chesapeake Bay, Adjacent Calvert County
Charts Nos. 16-17.

| Name | Acreage |
|---|---|
| 1. Hog Point Addition | 344 |
| 2. Upper Steps Addition No. 1 | 460 |
| 3. Upper Steps Addition No. 2 | 820 |
| 4. Lower Steps Addition | 532 |
| 5. Plum Point Addition No. 1 | 512 |
| 6. Plum Point Addition No. 2 | 251 |
| 7. Daddie Dare Addition | 1,070 |
| 8. Governors Run Addition No. 2 | 516 |
| 9. Governors Run Addition No. 1 | 194 |
| 10. Emanuel Addition | 62 |
| Total | 4,761 |

PATUXENT RIVER, CALVERT COUNTY—CHART NO. 19

| Name | Acreage |
|---|---|
| 1. Buzzard Island Addition | 43 |
| 2. Morsel Inner | 20 |
| 3. Macks Hollow Addition | 16 |
| 4. Broad Neck (Calvert) Addition | 23 |
| 5. Thomas (Calvert) Addition | 6 |
| 6. Jacks Bay Addition | 40 |
| 7. Parkers Wharf Addition | 148 |
| Total | 296 |

CHESAPEAKE BAY, ADJACENT ST. MARY'S COUNTY, CHARTS NOS. 20 AND 22

| Name | Acreage |
|---|---|
| 1. Hog Island Addition | 440 |
| 2. Cedar Point Hollow | 941 |
| 3. Fish Hawk Addition | 1,144 |
| 4. Shaving Pile | 835 |
| 5. Butler Addition | 890 |
| 6. Point Lookout | 1,168 |
| Total | 5,418 |

PATUXENT RIVER, ST. MARY'S COUNTY—CHARTS NOS. 19 AND 20

| Name | Acreage |
|---|---|
| 1. Billiard Point | 16 |
| 2. Trent Hall | 70 |
| 3. Broad Neck (St. Mary's) Addition | 148 |
| 4. Thomas (St. Mary's) Addition No. 2 | 52 |
| 5. Thomas (St. Mary's) Addition No. 1 | 264 |
| 6. Sandgates Addition | 50 |
| 7. Upper Forrest Addition | 145 |
| 8. Lower Forrest Addition | 208 |
| 9. Cole Creek | 267 |
| 10. Gatton Addition No. 2 | 122 |
| 11. Gatton Addition No. 1 | 112 |
| 12. Captain Point Addition | 163 |
| 13. Neale Addition | 107 |
| Total | 1,724 |

EASTERN BAY, QUEEN ANNE'S COUNTY, CHARTS NOS. 31 AND 32

| Name | Acreage |
|---|---|
| 1. Hollicutt Noose | 890 |
| 2. Bodkin Shoals Addition | 232 |
| 3. Parsons Island Narrows Addition | 148 |
| 4. Normans Marsh Addition | 100 |
| 5. Bald Eagle Addition No. 1 | 70 |
| 6. Bald Eagle Addition No. 2 | 686 |
| 7. Bald Eagle Addition No. 3 | 143 |
| Total | 2,269 |

CHOPTANK RIVER, TALBOT COUNTY—CHARTS NOS. 34 AND 35

| Name | Acreage |
|---|---|
| 1. Dawson Addition | 600 |
| 2. Choptank Lumps Addition | 420 |
| 3. Royston Addition No. 1 | 284 |
| 4. Royston Addition No. 2 | 76 |
| 5. Irish Creek Addition | 138 |
| 6. Light House Addition | 156 |
| 7. Beacon Addition | 170 |
| 8. Chlora Point Addition | 80 |
| 9. Howells Point Addition No. 1 | 140 |
| 10. Howells Point Addition No. 2 | 162 |
| 11. Dickinson Addition | 453 |
| 12. Kirby Addition No. 1 | 236 |
| 13. Kirby Addition No. 2 | 288 |
| 14. Scraping Line Addition | 292 |
| Total | 3.495 |

OFF BRANNOCK BAY, DORCHESTER COUNTY—CHART NO. 37

| Name | Acreage |
|---|---|
| 1. Red Buoy Addition | 577 |
| 2. Spedden Addition | 174 |
| 3. Diamond Addition No. 1 | 484 |
| 4. Diamond Addition No. 2 | 635 |
| 5. Brannock Addition | 495 |

| | | |
|---|---|---|
| 6. | Dupont Addition | 106 |
| 7. | Mill Point Addition | 124 |
| 8. | Hill's Point | 892 |
| | Total | 3,487 |

CHOPTANK RIVER, DORCHESTER COUNTY—CHARTS NOS. 35 AND 37

| | Name | Acreage |
|---|---|---|
| 1. | Todd Point Addition No. 1 | 320 |
| 2. | Todd Point Addition No. 2 | 404 |
| 3. | Todd Point Addition No. 3 | 192 |
| 4. | Corner Wharf Addition | 720 |
| 5. | Castle Haven Addition | 672 |
| 6. | Castle Haven Creek Addition | 211 |
| 7. | Horn Point Addition | 812 |
| | Total | 3,331 |

CHOPTANK RIVER, DORCHESTER COUNTY—CHARTS NOS. 35 AND 37

| | Name | Acreage |
|---|---|---|
| 1. | Le Compte Addition | 68 |
| 2. | Sandy Hill Addition | 324 |
| 3. | Turtle Back Addition | 140 |
| 4. | Sandy Hill Lumps Addition | 168 |
| 5. | Hambrooks Addition | 92 |
| 6. | Green Marsh Addition No. 1 | 37 |
| 7. | Green Marsh Addition No. 2 | 104 |
| | Total | 933 |

HOOPER STRAIT AND HONGA RIVER, DORCHESTER COUNTY

CHART NO. 40.

| | Name | Acreage |
|---|---|---|
| 1. | Wallace Creek | 916 |
| 2. | Gunners Island | 424 |
| 3. | Gunners Cove | 260 |
| 4. | Charles Creek | 602 |
| 5. | Back Cove | 760 |
| 6. | Wroten Island Addition | 604 |
| 7. | Ferry Point | 456 |
| 8. | Dark Point Addition No. 1 | 468 |
| 9. | Dark Point Addition No. 2 | 468 |

| | | |
|---|---|---|
| 10. | Bentley | 220 |
| 11. | Lakes Cove Addition No. 1 | 188 |
| 12. | Lakes Cove Addition No. 2 | 360 |
| 13. | Hog Cove | 278 |
| 14. | Windmill Addition | 82 |
| 15. | Paul Addition | 312 |
| 16. | Taylor Point | 462 |
| 17. | Long Point | 838 |
| 18. | Crab Point Addition | 373 |
| 19. | Lower Thoroughfare Addition No. 1 | 320 |
| 20. | Lower Thoroughfare Addition No. 2 | 230 |
| 21. | Norman Addition No. 1 | 386 |
| 22. | Norman Addition No. 2 | 490 |
| 23. | Black Beacon | 190 |
| 24. | Light House | 1,429 |
| 25. | Applegarth Addition | 312 |
| 26. | Hooper Straits Addition No. 1 | 458 |
| 27. | Hooper Straits Addition No. 2 | 268 |
| 28. | Hooper Straits Addition No. 3 | 356 |
| | Total | 12,510 |

Fishing Bay and Upper Tangier Sound, Dorchester County, Chart No. 41

| | Name | Acreage |
|---|---|---|
| 1. | Thorough Addition | 48 |
| 2. | Hill Addition | 198 |
| 3. | Farm Creek | 838 |
| 4. | Old House Addition | 492 |
| 5. | Bungay Addition | 968 |
| 6. | Roasting Ear Point | 208 |
| 7. | Goose Creek Addition No. 1 | 48 |
| 8. | Goose Creek Addition No. 2 | 300 |
| 9. | Duck Island Addition | 412 |
| 10. | Tedious Creek | 668 |
| 11. | Evans Addition | 1,170 |
| 12. | Bishops Head | 426 |
| 13. | Ware Sands Addition | 800 |
| 14. | Sand Shoal Addition | 240 |

| | | |
|---|---|---|
| 15. | Clay Island Addition (Tangier Sound) | 644 |
| 16. | Frog Point Addition | 1,230 |
| 17. | Mud Addition | 444 |
| | Total | 9,234 |

TANGIER SOUND, KEDGES STRAITS, MANOKIN AND BIG ANNEMESSEX RIVERS, SOMERSET COUNTY—CHARTS NOS. 6, 7 AND 9

| | Name | Acreage |
|---|---|---|
| 1. | Paul | 253 |
| 2. | Ditch Bank | 56 |
| 3. | Old Island | 404 |
| 4. | Terrapin Sands Inner | 300 |
| 5. | Terrapin Sands | 570 |
| 6. | Back Cove | 416 |
| 7. | Mussel Hole Addition | 420 |
| 8. | Grave Yard | 144 |
| 9. | Piney Island West Addition | 1,316 |
| 10. | Piney Island East Addition | 464 |
| 11. | Flat Cap | 694 |
| 12. | Harris Addition | 580 |
| 13. | Big Annemessex Addition | 381 |
| 14. | Drum Point Addition No. 1 | 158 |
| 15. | Drum Point Addition No. 2 | 292 |
| | Total | 6,448 |

| | |
|---|---|
| Total number of acres added to the area of natural oyster bars after re-survey | 53,906 |
| Total number of new bars | 139 |

A request came to the Commission in January, 1915, from Messrs. Pembroke and H. R. Mayo Thom and W. C. Watkins, who are lessees of bottoms in Chesapeake Bay, adjacent to Anne Arundel County, below Bodkin Point. These planters asked the Commission if a thorough investigation could be made of their leased area, in order that they could have an inventory of what was on the bottom, and know its character.

The Commission designated its Engineer to do the work during the months of February and March. Arrangement was made with the planters to have his services at the rate of $10.00 per day, when engaged. It was further agreed that the planters were

to furnish means of transportation to and from Baltimore, boats and equipment.

This being the first work of this character done in Maryland, your Engineer secured from the United States Bureau of Fisheries a bottom tester, designed with a disk and plunger. This device registered hard or shelly bottoms, soft or stiff mud. Large sectional charts were made to cover the area in question, which were sub-divided into ten-acre sections. Each of the 76 sub-divisions were first gone over with the bottom tester, then with the chain-wire drag, in order to get the shell curve, and lastly with the tonging method in order to get the average number of oysters (classified) in each section. This work was completed in March to the entire satisfaction of the planters.

Revised published charts, showing the new bars added, were also prepared during the winter, and were filed with the clerks of the Circuit Courts in the following counties:

Calvert, at Prince Frederick.
St. Mary's, at Leonardtown.
Somerset, at Princess Anne.
Dorchester, at Cambridge.
Talbot, at Easton.
Queen Anne's, at Centreville.

The Assistant Engineer was sent to certain localities during the winter and early spring to make urgent surveys for oyster lots. The Engineer was summoned to attend court in Dorchester County in April and Somerset County in May, 1915, in connection with protested applications and condemnation cases.

The State steamer "Governor R. M. McLane" was turned over for our work, and placed in commission June 1, 1915.

No re-examinations were made in connection with the dredging schooner during the year 1915. A number of protested applications for oyster grounds had to be examined. Counsel for the oystermen, in several counties, agreed to have the examinations made previous to the hearings in court. The re-examination brought out some interesting developments and a number of cases were compromised, while others proved the areas in question to be up to the standard of a natural oyster bar. A number of oyster lots were surveyed for planters and adjustments made on areas already leased. The Engineer was summoned to attend court on

oyster cases in Talbot, St. Mary's, Calvert, Charles and Anne Arundel counties between May and September of this year.

The use of the steamer "Governor McLane" was discontinued, September 15, 1915, and the crew paid off. The fall work of surveying scattering oyster lots was done by sending the Assistant Engineer, who hired a local boat while in the locality of the work. A number of the leases, following the surveys, were drawn and sent out from the office for signature of applicants to date.

The following is a summary of oyster lot work, adjustments, etc., during the years 1914 and 1915:

| 1914 | Oyster Lot Surveys | Oyster Lot Adjustments | Re-exam. of Protested Applications | Re-location of Lots | STATIONS Old | STATIONS New |
|---|---|---|---|---|---|---|
| Honga River | 0 | 0 | 0 | 1 | About 100 Triangulation Stations Re-Established in the Several Sections. | |
| Little Choptank River | 1 | 0 | 0 | 0 | | |
| Fishing Bay | 3 | 0 | 0 | 0 | | |
| Pocomoke Sound | 2 | 0 | 0 | 4 | | |
| Nanticoke River | 20 | 0 | 0 | 0 | | |
| Manokin River | 4 | 0 | 0 | 0 | | |
| Patuxent River | 0 | 0 | 0 | 5 | | |
| | 30 | | | 10 | | |
| 1915 | | | | | Old | New |
| Pocomoke Sound | 2 | 0 | 0 | 1 | 0 | 0 |
| Manokin River | 2 | 0 | 0 | 0 | 1 | 0 |
| Patuxent River | 9 | 17 | 4 | 1 | 13 | 17 |
| South River | 0 | 0 | 14 | 0 | 5 | 0 |
| West River | 8 | 0 | 0 | 0 | 7 | 5 |
| Miles River | 1 | 2 | 0 | 0 | 3 | 2 |
| Tred Avon River | 9 | 0 | 0 | 0 | 11 | 0 |
| Fishing Bay | 13 | 0 | 0 | 0 | 2 | 2 |
| Nanticoke River | 11 | 0 | 0 | 0 | 6 | 0 |
| Choptank River | 1 | 0 | 0 | 4 | 1 | 0 |
| Little Choptank River | 1 | 0 | 0 | 0 | 0 | 0 |
| Chesapeake Bay | 0 | 0 | 2 | 0 | 2 | 0 |
| St. Mary's River | 2 | 0 | 3 | 0 | 0 | 0 |
| | 59 | 19 | 23 | 6 | 51 | 26 |

Respectfully submitted,

(Signed) SWEPSON EARLE,
*Chief Engineer,*
*Md. Shell Fish Com'n.*

## EXHIBIT E

[*Extracts from the Report of the Engineer of the Commission on the Propagation and Protection of the Crab*]

### Rapid Growth of the Crab Industry

Prior to the year 1873 there was no actual demand for crabs outside of Maryland. Soft crabs were eaten in Crisfield some time before there was any thought of shipping them to the cities. A few were at first sold to express agents and railroad employees and the crab gradually found its way to game dealers in Philadelphia and other cities.

In less than four decades the people of the country have been educated to eat crabs in every conceivable way. With the increasing demand for soft crabs and crab meat came improved shipping and catching methods. Boxes constructed of thin pine boards contain from two to three trays. By means of the trays the lower layers of crabs may be examined without removing the upper ones, as was necessary in the boxes originally used. The work of packing crabs for shipment is begun by covering the bottom of the box to a depth of from two to three inches with seaweed which has been thoroughly picked over to remove all lumps. On this soft bed the crabs are packed in a nearly vertical position so close together that they cannot move out of place. Seaweed or moss is then placed over them, and over this is placed a layer of fine crushed ice. By this means soft crabs are shipped as far north as Canada and throughout the Middle West. Crisfield is the center of the soft-crab industry and it is a common sight to see seven carloads of crabs leave daily from that point. Many thousands of dollars pass through the Crisfield banks weekly to pay the people engaged in this industry.

The hand nets and bare-legged men and boys who sought the crabs in shoal creeks and around the shores now constitute but a small percentage of the catchers. The dead-rise skipjacks by the hundred sail over the waters where the bottoms are covered with grass. Scrapes, similar in shape to those used to take oysters, but having smooth bars without teeth and long bag-shaped nets, are dragged over the grassy bottoms, and the shedder and peeler

crabs, together with much grass, are taken by the thousands by this means.

The new methods of catching have enormously increased the waste. One of the large crab packers of Crisfield recently stated that "during the early stages of the industry the loss was not 10 per cent, today I calculate the loss to be 50 per cent and this waste is caused by having no protective measures to regulate the taking of crabs from the waters."

## How a Crab Grows

There are six stages of a crab's life, commonly classified as follows: First, the "hard crab," or one in its natural condition; second, a "snot," or one that has just entered the shedding stage; third, a "peeler," when the old shell has begun to break; fourth, a "buster," when the new shell can be seen; fifth, the "soft crab"; sixth, a "paper shell" or "buckram," when the new shell is beginning to harden. Crabs are sold by the fishermen principally in the "peeler" or "buster" condition, just before the shedding takes place, the proportion sold as soft crabs being much smaller. "Snots" are seldom bought by dealers, but are returned to the fishermen, who place them in their floats until they become "peelers" or, are in a salable condition.

All crab packers have what are known as floats, a rectangular box approximately 10 to 15 feet long, 4 feet wide and 2 feet deep, the sides and ends being constructed of lathes and the bottom of six-inch planks. Extending around the float on the outside, midway of its height, is a shelf about 7 inches wide, to prevent the float from sinking. These floats are used by the fishermen and dealers as a means of holding crabs that have entered upon the shedding process and are made fast to stakes or inclosed by a fence to prevent their being washed away by strong winds. Dealers employ men to watch their floats constantly and remove the crabs from the water immediately after the shedding process to prevent the hardening of the shell.

## The Hard-Crab Industry

The hard-crab industry, carried on largely in the upper tidewater counties, is conducted in a different manner. The fishermen engaged in taking the hard crabs are equipped with "trot lines."

These lines vary in length from 200 to 1,000 yards and are of cotton, manila or grass rope, the size averaging about three-eighths of an inch in diameter. Many fishermen tar their lines.

The bait, consisting of calf pelts, sting rays, hog chokers, spoiled beef, tripe, etc., is attached to snoods of fine twine about 18 inches in length, which are, in turn, fastened to the main line at intervals of 3 to 4 feet. Trot lines are always anchored on the bottom of a stream. For this purpose grapnels or killicks weighing from 5 to 10 pounds are used, one being placed at each end of the line. A buoy, usually consisting of a small keg or some wooden object, is attached to the anchor to mark its location.

The gasoline engine has revolutionized the work of fishing the trot lines. The old method of the sail brought the crabber to one of the buoys, and then he was obliged to pull the boat along by the trot line itself and net the crabs as the bait came to the surface of the water. While hundreds of crabbers are obliged to use this method, those owning gasoline boats have a board adjusted about amidships and projecting over the side about two feet, and being about the same distance above the water. In this board is a hole about six inches in diameter for the line and bait to pass through. By starting at one end of the line and running very slowly, the boat is steered down the line by a man or boy, while another stands in the bow and scoops in the crabs. By the use of two trot lines the boat can be kept almost continuously at work, going up one and down the other. The number of crabs caught by this improved method is easily 200 per cent more than the old.

### Crab-Picking Houses

Located on most of the important rivers are crab houses, where the fishermen dispose of the catch at from $1 to $1.50 per barrel for male crabs (the females being of much less value). An average barrel will hold 200 crabs. From the barrel the crabs are turned into large steam boxes divided into two sections and are steamed 45 minutes. They are then turned out on the floor of the assorting room, where the crab-pickers go for their supply. The pickers separate the meat into three vessels in order that it can be graded for market as follows:

1. "Lump," average market price $1 to $1.50 gallon.
2. "Flake," average market price 60 cents to 80 cents gallon.
3. "Claw," average market price 50 cents gallon.

The larger houses employ from 50 to 75 women and girls, who make from 50 cents to $2 a day. The crab meat is thoroughly washed and placed in six-pound buckets and shipped in barrels, well packed with crushed ice. The shells are cleaned and shipped with orders of crab meat, being used for "devil crabs." The part of the crab left after picking, called "trash," is sold for $14 a ton, and is used as a fertilizer.

To show how the demand for crab meat has increased, one of the largest packers on Honga River in 1902 shipped 300 gallons; in 1910 this same packer shipped 1,500 gallons. Similar instances were noted in many localities.

## Conservation of the Industry

While every improved contrivance has been adopted for catching and marketing the crab, but little thought has been given to its conservation.

The only protective measure for crabs on the Statute Books of Maryland is a closed season on hard crabs, between November and May, when there are practically no crabs to catch in our waters.

Without the immediate passage of protective measures and their strict enforcement, this important and lucrative industry is sure to decline. In fact, the season when crabs are most plentiful is becoming shorter. In 1910 boats were engaged from May until October, and the length of the catching period has shortened each season since. During the season of 1915 there was a great scarcity of crabs up to the month of July and those engaged in the industry realize that something must be done to conserve the supply.

The absence of any cull law on hard crabs causes a very serious waste, which in money value exceeds several hundred thousand dollars a year. The small hard crabs, under five (5) inches from tip to tip of shell are sold to the crab-packing houses in barrels together with the matured crabs, are dumped into the steam boxes and after being cooked are turned out on the floor of the assorting room. The crab pickers are paid for the quantity of meat they pick and the small crabs, too tedious to pick, are thrown on the "trash" pile. Thousands of small crabs are destroyed daily at every large packing house. If these undersized crabs are returned to the waters they would mature within five months. Forty matured crabs will pick out 6 pounds of crab meat. One thousand

crabs destroyed daily from 100 packing houses during the season would, if returned to the waters, yield more than 700 tons of edible meat. The wholesale market price is 18 cents per pound.

While the absence of a cull law accounts for a terrible waste, a more serious one is the destruction of the egg-bearing (sponge) females. It was found at one packing house that the number of female crabs received, having reached this stage of development, exceeded 20 per cent of the catch. The female crab bearing the eggs is of no value to the packer, as the meat is dark. They are usually so injured, however, in transportation to the packing house that they will not spawn even though returned by the packer to the water. The female crab spawns but once in her existence, which makes her protection most necessary. The egg-bearing females should never be taken.

During the months of August and September "doublers" (or copulating crabs) are plentiful in Maryland waters. The female crab, when taken with the male on the trot line, is a soft crab and has reached her maturity. Protecting the female at this period is practically as essential as protecting the egg-bearing female. This crab, after becoming hard, hikes it for the waters near the Capes of Virginia and becomes egg-bearing before the following spring.

The State of Virginia permits winter dredging for crabs in this locality. In Maryland we believe, and have the best authorities in support of our position, that the gravid females seek the warm waters near the Capes to spawn, yet those interested in the industry around Hampton, Virginia, the seat of the hard-crab industry in that State, contend that the only crabs taken during the winter in dredges are the "sow-crabs," the developed female who has spawned her once and only time in her existence, and that restriction of winter dredging is unnecessary.

# EXHIBIT F

## NAMES AND ADDRESSES OF LESSEES IN GOOD STANDING

### ARRANGED ACCORDING TO YEAR GRANTED

### ANNE ARUNDEL COUNTY

1906

| Name | Address | Acres |
|---|---|---|
| Hoopes, Eugene F. | Baltimore | 1¼ |
| Larson, Charles | Shady Side | 3 31/100 |
| Lerch, F. L. | Baltimore | 5 |
| Total | | 9 1/25 |

1907

| | | |
|---|---|---|
| Friemel, Maggie A. | Annapolis | 5 |
| Friemel, Charles A. | Annapolis | 2 |
| Wilde, William | Shady Side | 3⅓ |
| Wilde, Ferdinand | Shady Side | 2 |
| Total | | 12⅓ |

1908

| | | |
|---|---|---|
| Friemel, Maggie A. | Annapolis | 1 |
| Wilde, Ferdinand | Shady Side | 1 |
| Koch, Charles G. | Eastport | 1 |
| Heller, Wilhelm | Eastport | 1 |
| Frazier, Samuel R. | Eastport | 1 |
| Wilde, F. F. | Shady Side | 2 |
| Larson Charles | Shady Side | 2 |
| Friemel, Maggie A. | Annapolis | 1¼ |
| Kipper, Frederick W. | Annapolis | 1 |
| Gott, Winston G. | Annapolis | 1 |
| Heinrich, Gustav C. | Shady Side | 2¼ |
| Total | | 14½ |

1909

| | | |
|---|---|---|
| Womble, P. M. | Baltimore | 6¼ |
| Clark, Walter | Annapolis | 10 |
| Larson, Charles | Shady Side | 3½ |
| Total | | 19¾ |

1910

| | | |
|---|---|---|
| Heyward, James F. | Baltimore | 10 |
| Wilde, William Edward | Shady Side | 4½ |
| Williams, Henry | Eastport | 7 |
| Total | | 21½ |

1911

| Name | Address | Acres |
|---|---|---|
| Boessel, Louis | Annapolis | 1½ |
| Benning, Frank | Galloways | 5¼ |
| Owings, B. Allen | Shady Side | 2½ |
| Proctor, George W | Shady Side | 12½ |
| Atwell, James O | Shady Side | 4 |
| Parks, George L | River View | 1¼ |
| Evans, Wm. H | Annapolis | 3¼ |
| Likes, Sylvan H | Baltimore | 8¼ |
| Owings, Wm. Wallace, Jr | Shady Side | 2 |
| Wells, William J | Baltimore | 4 |
| Zang, William J | Galloways | 5 |
| Ford, Robert L | Shady Side | 7½ |
| Friemel, Charles A | Annapolis | 10 |
| Larson, Charles | Shady Side | 1 |
| Wilde, Frank F | Shady Side | 8 |
| Rogers, Robert L | Shady Side | 5½ |
| Witt, Charles | Shady Side | 3 |
| Lloyd, Wm. F | Shady Side | 3 |
| Bosley, J. Clifton | Annapolis | 10 |
| Total | | 97½ |

1912

| | | |
|---|---|---|
| Wilde, W. C | Shady Side | 5 |
| Tucker, James E | Shady Side | 3½ |
| Galloway, Geo. W | Annapolis | 2½ |
| Wilmer, Mrs. Belle H | Annapolis | 3¾ |
| Dawson, A. P | Mayo | 13 |
| Witt, C. Frederick | Mayo | 2½ |
| Dawson, J. Wesley | Mayo | 3¾ |
| Witt, Robert H | Mayo | 3½ |
| Woolford, John B | Eastport | 1 |
| Bast, Wm. Frederick | Shady Side | 6 |
| Nowell, Wm. G | Shady Side | 31⅓ |
| Smith, J. Percy | Shady Side | 5½ |
| Hartge, Edmund L | Shady Side | 3 |
| Obery, J. F | Annapolis | 2¼ |
| Witt, R. H | Mayo | 3 |
| Turner, U. G | Shady Side | 3½ |
| Bast, Wm. F | Shady Side | 2½ |
| Total | | 95 17/24 |

1913

| | | |
|---|---|---|
| Thom, H. R. Mayo | Baltimore | 500 |
| Thom, J. Pembroke | Baltimore | 480 |
| Watkins, W. G | Baltimore | 500 |
| Aldridge, Robert G | Annapolis | 30 |
| Giddings, Miss E | Annapolis | 10 |
| Total | | 1,520 |

1914

| Name | Address | Acres |
|---|---|---|
| Obery, John F. | Annapolis | 3.25 |
| Watkins, Mattie T. | Baltimore | 54 |
| Harold, Charles | Annapolis | 15 |
| Total | | 72.25 |

1915

| | | |
|---|---|---|
| Hopkins, Oswald B. | Leitch | 10 |
| Corning, Charles F. | Baltimore | 10 |
| Prann, Oscar | Shady Side | 3 |
| Woodfield, Herman A. | Galloways | 8.50 |
| Total | | 31.50 |

## CALVERT COUNTY

1906

| Name | Address | Acres |
|---|---|---|
| Breeden, Laura V. | Sollers | 3.50 |
| Breeden, Barbara E. | Sollers | 5 |
| Gantt, Wm. Warren | Fraziers | 1.25 |
| Gantt, John B. | Lusby | 2 |
| Joy, John B. | Solomons | 2 |
| Breeden, William E. | Sollers | 5 |
| Total | | 18.75 |

1910

| | | |
|---|---|---|
| Hutchins, Benson G. | Bowens | 3 |
| Gray, John B. | Prince Frederick | 10 |
| Gray, John B. | Prince Frederick | 10 |
| Gourley, T. B. | Barstow | 6 |
| Hutchins, J. Harry | Bowens | 6 |
| Bond, H. M. C. | Baltimore | 10 |
| Bond, Harry C. | Adelina | 10 |
| Bond, Nina Chesley | Adelina | 10 |
| Bond, Ethel Skinner | Adelina | 10 |
| Gourley, Thos B. | Barstow | 10 |
| Hance, S. J. D. | Adelina | 10 |
| Hance, A. M. S. | Adelina | 10 |
| Total | | 105 |

1911

| | | |
|---|---|---|
| Parran, J. Frank | Prince Frederick | 10 |
| Belt, Chas. R., Jr. | Mutual | 10 |
| Belt, Helen M. | Mutual | 10 |
| Conner, James E. | Adelina | 10 |
| Hammett, S. J. | Bowens | 10 |
| Total | | 50 |

1912

| Name | Address | Acres |
|---|---|---|
| Glover, John W. | Solomons | 5 |
| Northam, W. E. | Solomons | 18 |
| Kopp, John C. | Solomons | 5 |
| Seipp, William A. | Solomons | 9.50 |
| Elliott, D. T. | Broomes Island | 5 |
| Total | | 42.50 |

1913

| | | |
|---|---|---|
| Quarles, Edward | Belair | 30 |
| Quarles, Mrs. M. D. | Belair | 30 |
| Fulford, Frank M. | Baltimore | 30 |
| Fulford, A. M. | Baltimore | 30 |
| Daugherty, Frank | Belair | 30 |
| Bowen, Abram G. | Barstow | 10 |
| Bowen, Cephas H. | Bowens | 4 |
| Jones, W. M. | Prince Frederick | 8 |
| Hammett, J. H. | Benedict | 8.5 |
| Breeden, J. Edw. | Sollers | 25 |
| Breeden, Thos. E. | Sollers | 24 |
| Breeden, Geo. L. | Sollers | 30 |
| Leitch, J. J. | Buena Vista | 3.5 |
| Smith, J. B. | Prince Frederick | 5 |
| Turner, Geo. D. | Prince Frederick | 5 |
| Breeden, Richard B. | Sollers | 30 |
| Breeden, James R. | Sollers | 30 |
| Brome, Nathaniel W. | St. Leonard's | 30 |
| Brome, Mrs. Margaret | St. Leonard's | 30 |
| Blunt, John W. | Sollers | 30 |
| Hance, Young D. | Adelina | 18 |
| Total | | 441 |

1914

| | | |
|---|---|---|
| Duke, Alexander B. | Adelina | 6 |
| Duke, B. Parran | Adelina | 5 |
| Hance, Young D. | Adelina | 12 |
| Hance, Benjamin | Adelina | 30 |
| Hance, A. M. L. | Adelina | 30 |
| Leitch, J. J. | Buena Vista | 7 |
| Bond, C. Benton | Sandgates | 5 |
| Total | | 95 |

1915

| | | |
|---|---|---|
| Harris, Geo. H. | Prince Frederick | 7.5 |
| Wells, C. A. M. | Hyattsville | 10 |
| Monnett, Geo. L. | Wallville | 2 |
| Sewall, Alpheus R. | Broomes Island | 2 |
| Parks, Geo. W. | Broomes Island | 2 |
| Total | | 23.5 |

## CHARLES COUNTY

1906

| Name | Address | Acres |
|---|---|---|
| Lancaster, S. S. | Rock Point | 5 |

1911

| | | |
|---|---|---|
| Horseman, J. H. M. | Benedict | 4 |
| Chappelear, Andrew L. | Benedict | 4.5 |
| Total | | 8.5 |

1912

| | | |
|---|---|---|
| Hayden, H. A. | Cooksey | 5 |
| Henderson, B. F. | Benedict | 3 |
| Henderson, Aletha H. | Benedict | 14 |
| Bowling, Jas. M. and H. R., Trustees. | Hughesville | 11 |
| Copsey, James E. | Benedict | 5 |
| Moore, Thos. W., Jr. | Baltimore | 10 |
| Moore, Thomas | Baltimore | 20 |
| Bowling, Jas. M. and H. R., Trustees. | Hughesville | 10 |
| Buckler, Geo. W. | Benedict | 5.5 |
| Moore, Thos. W., Jr. | Baltimore | 8 |
| Total | | 91.5 |

1913

| | | |
|---|---|---|
| Chappelear, T. J. | Benedict | 5 |
| Bowling, James M. | Hughesville | 30 |
| Total | | 35 |

1914

| | | |
|---|---|---|
| Lancaster, S. S. | Rock Point | 6 |
| Schymansky, A. | Rock Point | 3 |
| Total | | 9 |

1915

| | | |
|---|---|---|
| Thomas, Jas. E. | Benedict | 1.25 |
| Horseman, Geo. T. | Benedict | 10 |
| Total | | 11.25 |

## DORCHESTER COUNTY

1906

| Name | Address | Acres |
|---|---|---|
| Bonds, Maria L. | Cambridge | 1.33 |
| Clayton, John W. | Hoopersville | 5 |
| Gray, Bessie | Elliott | 3.75 |
| Moore, Phoeby | Elliott | 1.87 |
| Total | | 11.95 |

1909

| Name | Address | Acres |
|---|---|---|
| Young, R. H. | Nanticoke | 10 |

1912

| | | |
|---|---|---|
| Hurley, Elijah | Vienna | 10 |
| Travers, W. S. | Nanticoke | 8 |
| Elliott, W. E. | Nanticoke | 3 |
| Travers, F. M. | Nanticoke | 10 |
| Harrington, Geo. T. | Nanticoke | 8 |
| Foxwell, Wm. M. | Elliott | 4 |
| Moore, Herman W. | Elliott | 17 |
| Moore, Earl W. | Elliott | 2 |
| Harrington, C. W. | Nanticoke | 9 |
| Gray, Cornelius | Elliott | 5 |
| Gray, Ernest M. | Elliott | 5 |
| Horseman, Riley | Elliott | 5 |
| Travers, J. E. | Nanticoke | 4 |
| Travers, J. E. | Nanticoke | 5 |
| Moore, Herman W. | Elliott | 3 |
| Gray, Mrs. Clara E. | Elliott | 5 |
| Travers, Sarah E. | Nanticoke | 20 |
| Total | | 123 |

1913

| | | |
|---|---|---|
| Travers, W. S. | Nanticoke | 5 |
| Williams, A. H. | Nanticoke | 30 |
| Messick, Annie E. | Nanticoke | 17 |
| Elliott, J. S. | Nanticoke | 4.5 |
| Total | | 56.5 |

1914

| | | |
|---|---|---|
| Gray, Sampson | Elliott | 5 |
| Gray, Sampson | Elliott | 6.5 |
| Gray, Harvey | Elliott | 10 |
| Radcliffe, Geo. L. | Baltimore | 15 |
| Hurley, M. W. | Elliott | 7 |
| Total | | 43.5 |

1915

| | | |
|---|---|---|
| Horseman, Riley | Elliott | 5 |
| Travers, W. S. | Nanticoke | 12 |
| Covington, Milton | Elliott | 5 |
| Foxwell, Clarence | Elliott | 4 |
| Covington, Nehemiah J. | Elliott | 10 |
| Bramble, Albert H. | Elliott | 3 |
| Shorter, Leonard | Elliott | 2 |
| Evans, J. W. T. | Elliott | 11 |
| Gray, David | Elliott | 5 |
| Total | | 57 |

## QUEEN ANNE'S COUNTY

1912

| Name | Address | Acres |
|---|---|---|
| Greaves, C. A. | Stevensville | 4.75 |

## ST. MARY'S COUNTY

1906

| Name | Address | Acres |
|---|---|---|
| Abell, Geo. C. | Leonardtown | 1 |
| Coad, Edwin J. | Drayden | 5 |
| Hyatt, Alpheus | Porto Bello | 5 |
| Kennedy, Alexander | St. Mary's City | 5 |
| Shorter, Chas. E. | Drayden | 2.33 |
| Swann, J. Thomas | Piney Point | 1 |
| Wood, Chas. D. | Wynne | 2 |
| Norris, J. Walter | Hollywood | 1 |
| Norris, James J. | Hollywood | 1 |
| Total | | 23.33 |

1912

| | | |
|---|---|---|
| Ryder, Henry | Benedict | 10 |
| Copsey, W. Ernest | Benedict | 6.5 |
| Sothoron, Marshall | Charlotte Hall | 10 |
| Dixon, Daniel T. | Laurel Grove | 27.5 |
| Northam, W. E. | Solomons | 10 |
| Northam, Nettie M. | Solomons | 10 |
| Spedden, Jas. B. | Sandgates | 5 |
| Spedden, Jas. B. | Sandgates | 20 |
| Spedden, Robt. H. | Sandgates | 10 |
| Ryder, Justus | Oakville | 30 |
| Harper, Daniel | Mechanicsville | 20 |
| Dixon, Sallie | Prince Frederick | 28 |
| Wallace, Wm. | Laurel Grove | 30 |
| Messick, Harry G. | Benedict | 7 |
| Cheseldine, Wm. A. | Maddox | 3 |
| Russell, Jos. S. | Chaptico | 7.5 |
| Grave, Stephen L. | Maddox | 5 |
| Grave, Stephen L. | Maddox | 4 |
| Northam, Nettie M. | Solomons | 20 |
| Joy, Harry H. | Hollywood | 1 |
| Total | | 264.5 |

1913

| | | |
|---|---|---|
| Heyer, J. C. F. | Drayden | 6.5 |
| Biscoe, W. M. | Drayden | 15 |
| Sothoron, Fannie B. | Charlotte Hall | 10 |
| Ryder, Annie S. | Sandgates | 30 |
| Ryder, Earl C. | Oakville | 23 |
| Jones, Stephen M. | Leonardtown | 4.25 |
| Long, R. J. | Oraville | 5 |
| Sampson, Lilla B. | Sandgates | 12 |

| Name | Address | Acres |
|---|---|---|
| Davis, Louis C. | Hollywood | 1.5 |
| Dent, W. F. | Park Hall | 13 |
| Norris, Jas. J. | Hollywood | 23 |
| Ewell, Harrison | Compton | 18 |
| Barnes, Geo. F. | Mechanicsville | 2 |
| Seipp, A. M. | Solomons | 14 |
| Langford, Eugene | Adelina | 30 |
| Morgan, John W. | Oraville | 6 |
| Messick, H. G. | Benedict | 6 |
| Chappelear, H. C. | Hughesville | 30 |
| Biscoe, Wm. M. | Drayden | 6.5 |
| Callis, Noah W. | Hollywood | 10 |
| Briscoe, J. H. T. | Leonardtown | 19 |
| Bowen, Jessie M. | Baltimore | 30. |
| Johnson, Wm. Fell, Jr. | Baltimore | 30 |
| Gatton, Ella A. | Hollywood | 9 |
| Ucker, Clement S. | Baltimore | 8 |
| Norris, Annie E. | Hollywood | 29 |
| Fenwick, Theodore | St. Inigoes | 5 |
| Chappelear, Thos. J. | Benedict | 5 |
| Johnson, L. B. | Morganza | 30 |
| Dent, W. F. | Park Hall | 13 |
| Ewell, Harrison | Compton | 18 |
| Morgan, John | St. Mary's City | 5 |
| Brome, Mrs. J. T. | St. Mary's City | 11 |
| Wise, Jackson | Compton | 3 |
| Phillips, John | Porto Bello | 6.5 |
| Collins, Joseph | Palmers | 30 |
| Abell, John B. | Leonardtown | 18 |
| Norris, J. Walter | Hollywood | 30 |
| Total | | 565.25 |

1914

| | | |
|---|---|---|
| Mattingly, Geo. L. | Baltimore | 5 |
| Bond, C. Benton | Sandgates | 5 |
| Total | | 10 |

1915

| | | |
|---|---|---|
| Burch, S. Bernard | Mechanicsville | 3 |
| Harper, John | Oraville | 5 |
| Clarke, Charles K. | Baltimore | 17 |
| Hayden, J. Ignatius | Drayden | 4 |
| Horseman, Geo. T. | Benedict | 10 |
| Ryder, R. Henry | Oakville | 21 |
| Total | | 60 |

## SOMERSET COUNTY

### 1909

| Name | Address | Acres |
|---|---|---|
| Tull, Mildred | Marion Station | 10 |
| Tull, Mary L. | Marion Station | 10 |
| Tull, Annie E. | Marion Station | 10 |
| Tull, Beulah C. | Marion Station | 10 |
| Tull, Blanche | Marion Station | 10 |
| Landon, Wm. J. | Marion Station | 10 |
| Tull, F. H. | Marion Station | 9 |
| Total | | 69 |

### 1912

| | | |
|---|---|---|
| Blake, W. C. | Tull's Corner | 10 |
| Hopkins, S. C. | Mt. Vernon | 5 |
| Cox, Geo. A. | Fairmount | 30 |
| Cox, Effie K. | Upper Fairmount | 30 |
| Cox, Susie E. | Fairmount | 30 |
| Cox, W. Ernest | Fairmount | 30 |
| Tull, Annie E. | Marion Station | 20 |
| Whealton, E. M. | Marion Station | 30 |
| Whealton, J. H. | Marion Station | 30 |
| Cox, Elsie M. | Fairmount | 30 |
| Bennett, Wm. F. | Inverness | 10 |
| Taylor, Geo. T. | Marion Station | 10 |
| Sterling, I. T. | Crisfield | 30 |
| Bennett, Wm. F. | Inverness | 20 |
| Bennett, John W. | Inverness | 15 |
| Catlin, W. F. | Upper Fairmount | 6.5 |
| Hopkins, John F. | Mt. Vernon | 5 |
| Scott, Lucy V. | Princess Anne | 20 |
| Ward, Geo. F. | Marion Station | 2 |
| Total | | 363.5 |

### 1913

| | | |
|---|---|---|
| Mahoney, Jos. T. | Crisfield | 25 |
| Whittington, A. A. | Marion Station | 21 |
| Ford, Elmer A. | Fairmount | 30 |
| Mahoney, S. M. | Crisfield | 20 |
| Miles, Edwin E. | Marion Station | 5 |
| Crockett, Carroll | Crisfield | 30 |
| Crockett, John W. | Crisfield | 30 |
| Crockett, Beulah | Crisfield | 30 |
| Crockett, Lillian J. | Crisfield | 30 |
| Coleman, Wm. C. | Baltimore | 100 |
| Semmes, John E., Jr. | Baltimore | 100 |
| Harwood, John T. | Baltimore | 100 |
| Harwood, Chas. M. | Baltimore | 100 |
| Olivier, Stuart | Baltimore | 100 |
| Willis, Lavinia H. | Baltimore | 100 |
| Harwood, Mrs. Bradford | Baltimore | 100 |
| Locke, James | Baltimore | 100 |
| Williams, N. Winslow | Baltimore | 100 |

| Name | Address | Acres |
|---|---|---|
| Thelin, Griswold | Baltimore | 100 |
| Ewing, W. J. | Baltimore | 100 |
| Norton, E. L. | Baltimore | 100 |
| Bouton, E. H. | Baltimore | 100 |
| Handy, John T. | Crisfield | 30 |
| Harwood, O. M. | Baltimore | 100 |
| Harwood, Charlotte G. | Baltimore | 100 |
| Webb, Frank D. | Baltimore | 100 |
| Cox, Richard A. | Upper Fairmount | 100 |
| Gibson, O. P. | Crisfield | 100 |
| Gibson, W. L. | Crisfield | 100 |
| Gibson, B. F. | Crisfield | 100 |
| Wharton, Chas. S. | Crisfield | 100 |
| Quinn, Wallace W. | Crisfield | 20 |
| Quinn, Egbert L. | Crisfield | 10 |
| Richardson, Ella H. | Marion Station | 30 |
| Quinn, David L. | Crisfield | 30 |
| Boyd, Robt. | Shelltown | 5 |
| Jackson, J. Wesley | Marion Station | 10 |
| Richardson, Agnes | Marion Station | 20 |
| Richardson, Newman | Marion Station | 20 |
| Richardson, W. S. | Marion Station | 30 |
| Horsey, Ruth R. | Marion Station | 30 |
| Total | | 2,556 |

1914

| | | |
|---|---|---|
| Wyatt, Philip P. | Oriole | 8 |
| Gray, Jas. M. | Shelltown | 5 |
| Dorman, Geo. E. | Crisfield | 5 |
| Mister, Lawson | Shelltown | 5 |
| Total | | 23 |

## TALBOT COUNTY

1906

| Name | Address | Acres |
|---|---|---|
| Baynard, G. Oscar | St. Michaels | 5 |
| McConnell, Rev. S. D. | Easton | 5 |
| Pearson, Henry H., Jr. | Claiborne | 4.66 |
| Pearson, Henry H., Jr. | Claiborne | 5 |
| Total | | 19.66 |

1912

| | | |
|---|---|---|
| Smith, William I. | Oxford | 5 |

1913

| | | |
|---|---|---|
| Nickerson, C. C. | Easton | 30 |
| Leland, Mary V. | Cambridge | 30 |
| Leland, Henry | Cambridge | 30 |
| Phillips, Maggie A. | Cambridge | 30 |

| Name | Address | Acres |
|---|---|---|
| Pastorfield, P. M. | Royal Oak | 30 |
| Harding, Robert C. | Bellevue | 30 |
| Valliant, W. H. | Bellevue | 30 |
| Harris, Hattie L. | Bellevue | 25 |
| Bingham, Millard F. | Oxford | 30 |
| Wingard, Geo. M. | Oxford | 10 |
| Harding, W. B. | Bellevue | 30 |
| Scott, Forest | Bellevue | 8 |
| Earle, Anna K. | Easton | 10 |
| Harrison, W. E. | Sparrows Point | 30 |
| Fountain, Alexander | Easton | 30 |
| Total | | 383 |

1914

| | | |
|---|---|---|
| Porter, Mabelle H. | St. Michaels | 11 |
| Bringham, Wm. H. | Oxford | 30 |
| Crockett, J. D. | Oxford | 25 |
| Arringdale, Margaret C. | Baltimore | 30 |
| Dodson, E. Ney | St. Michaels | 30 |
| Lloyd, C. Howard | Easton | 15 |
| Buck, Edw. R. | St. Michaels | 9 |
| Beale, E. de V. Lurman | Baltimore | 6.5 |
| Total | | 156.5 |

1915

| | | |
|---|---|---|
| Dodson, Florence K. | St. Michaels | 26 |
| Woodall, Edw. | Royal Oak | 13 |
| Fairbank, C. E. | Royal Oak | 10 |
| Dodson, Richard S. | St. Michaels | 12 |
| Rollins, Thornton | Baltimore | 14 |
| Roe, Levi D. | Bellevue | 5 |
| Carver, G. U. | Oxford | 10 |
| Total | | 90 |

## WICOMICO COUNTY

1906

| Name | Address | Acres |
|---|---|---|
| Covington, Jas. K. | Tyaskin | 2.12 |

1909

| | | |
|---|---|---|
| Young, Robert H. | Nanticoke | 10 |
| Dashiell, Mary P. | Nanticoke | 10 |
| Williams, Jennie E. | Nanticoke | 10 |
| Total | | 30 |

1910

| Name | Address | Acres |
|---|---|---|
| Nutter, Maurice G. | Nanticoke | 5 |
| Nutter, John W. | Nanticoke | 10 |
| Total | | 15 |

1912

| | | |
|---|---|---|
| Turner, Alice P. | Nanticoke | 3 |
| Cox, William B. | Nanticoke | 5 |
| Hopkins, John T. | Mt. Vernon | 5 |
| Walter, Robert F. | Nanticoke | 30 |
| Messick, Annie E. | Nanticoke | 13 |
| Larmore, G. H. C. | Tyaskin | 5 |
| Leatherbury, W. K. | Salisbury | 30 |
| Robertson, Mrs. C. B. | Salisbury | 10 |
| Total | | 101 |

1913

| | | |
|---|---|---|
| Travers, Robt. E. | Nanticoke | 30 |
| Travers, S. E. | Nanticoke | 10 |
| Total | | 40 |

1914

| | | |
|---|---|---|
| Insley, J. Fred | Tyaskin | 11 |
| Larrimore, C. W. | Tyaskin | 4 |
| Travers, Minnie E. | Nanticoke | 11 |
| Willing, Frank A. | Bivalve | 11 |
| Willing, Frank A. | Bivalve | 5.5 |
| Insley, John H. | Nanticoke | 5 |
| Denton, Wm. F. | Tyaskin | 6 |
| Dickerson, L. C. | Tyaskin | 4.5 |
| Total | | 58 |

1915

| | | |
|---|---|---|
| Riall, Ernest A. | Tyaskin | 4.5 |
| Taylor, E. A. | Bivalve | 2 |
| Wright, Allen | Jesterville | 6 |
| Heath, Edward J. | Jesterville | 5 |
| Total | | 17.5 |

# EXHIBIT G

## FINANCIAL STATEMENT

## MARYLAND SHELL FISH COMMISSION

OCTOBER 1, 1913, TO SEPTEMBER 30, 1914

| | |
|---|---|
| Balance on hand October 1, 1913 | $8,746.48 |

*Receipts*

| | |
|---|---|
| Appropriations under Chapter 637, Acts of 1912 | 9,800.00 |
| Appropriation under Chapter 703, Acts of 1914 | 15,000.00 |
| Application Fees | 370.00 |
| Survey Fees | 280.00 |
| Recording Fees | 147.50 |
| Advance Fee Account | 36.00 |
| Certified Copies of Leases | 6.00 |
| Rents | 4,625.96 |
| Court Fee (refunded) | 2.50 |
| Total | $39,014.44 |

*Disbursements*

| | |
|---|---|
| Advertising, Printing and Office Supplies | $857.56 |
| Boats and Buoys | 1,527.05 |
| Chesapeake and Potomac Telephone Company | 90.35 |
| Advertising Applications | 491.20 |
| Court Fees | 20.95 |
| Subsistence | 529.75 |
| Postage, Expressage and Incidentals | 104.68 |
| Miscellaneous Expense of Commission | 325.22 |
| Salary of Commissioners | 5,600.00 |
| Salary of Chief Clerk | 1,200.00 |
| Salary of Engineers | 2,124.93 |
| Salary of Assistant Clerks and Stenographer | 2,379.96 |
| Salary of Counsel | 626.43 |
| Salary of Assistant Engineers | 375.00 |
| Scientific and Engineering Supplies | 39.93 |
| Labor | 1,465.64 |
| Office Rent | 600.00 |
| Miscellaneous Expense of Surveyor | 189.13 |
| Application Fees (refunded) | 50.00 |
| Total | $18,597.78 |
| Balance on hand October 1, 1914 | 20,416.66 |
| Total | $39,014.44 |

# EXHIBIT H

## FINANCIAL STATEMENT

## MARYLAND SHELL FISH COMMISSION

OCTOBER 1, 1914, TO SEPTEMBER 30, 1915

| | |
|---|---|
| Balance on hand October 1, 1914 | $20,416.66 |

*Receipts*

| | |
|---|---|
| Appropriations under Chapter 389, Acts of 1914 | 9,800.00 |
| Application Fees | 260.00 |
| Rents | 3,209.72 |
| Recording fees | 165.00 |
| Survey Fees | 320.00 |
| Special Surveys | 80.00 |
| Certified Copies of Leases | 92.50 |
| Total | $34,343.88 |

*Disbursements*

| | |
|---|---|
| Advertising applications | $884.80 |
| Application Fees (refund) | 300.00 |
| Advertising and Office Supplies | 84.33 |
| Buoys and Boats | 1,457.31 |
| Court Fees | 1,141.46 |
| Counsel Fees | 175.50 |
| Chesapeake and Potomac Telephone Company | 71.70 |
| Labor | 1,861.68 |
| Miscellaneous Expenses of Commission | 540.21 |
| Miscellaneous Expenses of Engineer | 210.49 |
| Miscellaneous Expenses of Assistant Engineer | 36.37 |
| Office Rent | 600.00 |
| Postage, Expressage and Incidentals | 51.31 |
| Salary of Commissioners | 5,600.00 |
| Salary of Engineer | 2,499.96 |
| Salary of Assistant Engineer | 1,150.00 |
| Salary of Assistant Clerks and Stenographer | 2,559.96 |
| Salary of Chief Clerk | 1,200.00 |
| Scientific and Engineering Supplies | 283.22 |
| Subsistence on Steamer "McLane," etc. | 1,470.39 |
| Rent (refund) | 48.50 |
| Total | $22,227.19 |
| Reverting to State, by order of Comptroller | 2,449.37 |
| Total | $24,676.56 |
| Balance on hand October 1, 1915 | 9,667.32 |
| | $34,343.88 |

# EXHIBIT I

## LEASES GRANTED, ARRANGED ACCORDING TO THE YEAR IN WHICH THEY WERE GRANTED

| Counties | 1906 | | 1907 | | 1908 | | 1909 | | 1910 | | 1911 | | 1912 | | 1913 | | 1914 | | 1915 | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres |
| Anne Arundel. | 18 | 70.34 | 12 | 91.336 | 19 | 62.10 | 6 | 44.75 | 8 | 69.50 | 21 | 116. | 17 | 95.58 | 5 | 1,522. | 3 | 72.25 | 4 | 31.50 | 113 | 2,175.356 |
| Charles | 13 | 56.15 | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 2 | 8.50 | 10 | 91.50 | 2 | 35. | 2 | 9. | 2 | 11.25 | 31 | 211.40 |
| Calvert | 62 | 235.28 | .... | ..... | .... | ..... | .... | ..... | 17 | 152. | 5 | 50. | 5 | 42.50 | 21 | 441. | 7 | 95. | 5 | 23.50 | 122 | 1,039.28 |
| Dorchester | 80 | 373. | .... | ..... | .... | ..... | 1 | 10. | .... | ..... | .... | ..... | 17 | 123. | 4 | 56.50 | 5 | 43.50 | 9 | 57. | 116 | 663. |
| Kent | 1 | 5. | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | ..... | ..... | .... | ..... | .... | ..... | 1 | 5. |
| Queen Anne's. | 6 | 22.39 | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 1 | 4.75 | ..... | ..... | .... | ..... | .... | ..... | 7 | 27.14 |
| Somerset | 190 | 945.875 | 52 | 473. | .... | ..... | 7 | 69. | .... | ..... | .... | ..... | 19 | 363.50 | 41 | 2,556. | 4 | 23. | .... | ..... | 313 | 4,430.375 |
| St. Mary's | 37 | 124.663 | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 20 | 264.5 | 38 | 565.25 | 2 | 10. | 6 | 60. | 103 | 1,024.413 |
| Talbot | 48 | 194.10 | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 1 | 5. | 15 | 383. | 8 | 156.50 | 7 | 90. | 79 | 828.60 |
| Wicomico | 19 | 89.125 | .... | ..... | .... | ..... | 15 | 150. | 2 | 15. | .... | ..... | 8 | 101. | 2 | 40. | 8 | 58. | 4 | 17.50 | 58 | 470.625 |
| Totals | 474 | 2,115.923 | 64 | 564.336 | 19 | 62.10 | 29 | 273.75 | 27 | 236.50 | 28 | 174.50 | 98 | 1,091.33 | 128 | 5,598.75 | 39 | 467.25 | 37 | 290.75 | 943 | 10,875.189 |

# EXHIBIT J

LEASES CANCELED, ARRANGED ACCORDING TO THE YEAR IN WHICH THEY WERE GRANTED

| Counties | 1906 | | 1907 | | 1908 | | 1909 | | 1910 | | 1911 | | 1912 | | 1913 | | 1914 | | 1915 | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres |
| Anne Arundel. | 15 | 60.78 | 8 | 79.006 | 8 | 47.60 | 3 | 25. | 5 | 48 | 2 | 18.50 | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 41 | 278.886 |
| Charles..... | 12 | 51.15 | .... | ..... | .... | ..... | .... | ..... | .... | .... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 12 | 51.15 |
| Calvert..... | 56 | 216.53 | .... | ..... | .... | ..... | .... | ..... | 5 | 47 | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 61 | 263.53 |
| Dorchester..... | 76 | 361.05 | .... | ..... | .... | ..... | .... | ..... | .... | .... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 76 | 361.05 |
| Kent..... | 1 | 5. | .... | ..... | .... | ..... | .... | ..... | .... | .... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 1 | 5. |
| Queen Anne's. | 6 | 22.39 | .... | ..... | .... | ..... | .... | ..... | .... | .... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 6 | 22.39 |
| Somerset..... | 190 | 945.875 | 52 | 473. | .... | ..... | .... | ..... | .... | .... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 242 | 1,418.875 |
| St. Mary's..... | 28 | 101.333 | .... | ..... | .... | ..... | .... | ..... | .... | .... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 28 | 101.383 |
| Talbot..... | 44 | 174.431 | .... | ..... | .... | ..... | .... | ..... | .... | .... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 44 | 174.431 |
| Wicomico..... | 18 | 87. | .... | ..... | .... | ..... | 12 | 120. | .... | .... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 30 | 207. |
| Totals..... | 446 | 2,025.539 | 60 | 552.006 | 8 | 47.60 | 15 | 145. | 10 | 95 | 2 | 18.50 | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 541 | 2,883.645 |

# EXHIBIT K

## LEASES IN GOOD STANDING, ARRANGED ACCORDING TO THE YEAR IN WHICH THEY WERE GRANTED

| Counties | 1906 | | 1907 | | 1908 | | 1909 | | 1910 | | 1911 | | 1912 | | 1913 | | 1914 | | 1915 | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres | No. | Acres |
| Anne Arundel. | 3 | 9.56 | 4 | 12.33 | 11 | 14.50 | 3 | 19.75 | 3 | 21.50 | 19 | 97.50 | 17 | 95.58 | 5 | 1,522. | 3 | 72.25 | 4 | 31.50 | 72 | 1,896.47 |
| Calvert | 6 | 18.75 | .... | ..... | .... | ..... | .... | ..... | 12 | 105. | 5 | 50. | 5 | 42.50 | 21 | 441. | 7 | 95. | 5 | 23.50 | 61 | 775.75 |
| Charles | 1 | 5. | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 2 | 8.50 | 10 | 91.50 | 2 | 35. | 2 | 9. | 2 | 11.25 | 19 | 160.25 |
| Dorchester | 4 | 11.95 | .... | ..... | .... | ..... | 1 | 10. | .... | ..... | .... | ..... | 17 | 123. | 4 | 56.50 | 5 | 43.50 | 9 | 57. | 40 | 301.95 |
| Queen Anne's. | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 1 | 4.75 | ..... | ..... | .... | ..... | .... | ..... | 1 | 4.75 |
| Somerset | .... | ..... | .... | ..... | .... | ..... | 7 | 69. | .... | ..... | .... | ..... | 19 | 363.50 | 41 | 2,556. | 4 | 23. | .... | ..... | 71 | 3,011.50 |
| St. Mary's | 9 | 23.33 | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 20 | 264.50 | 38 | 565.25 | 2 | 10. | 6 | 60. | 75 | 923.08 |
| Talbot | 4 | 19.669 | .... | ..... | .... | ..... | .... | ..... | .... | ..... | .... | ..... | 1 | 5. | 15 | 383. | 8 | 156.50 | 7 | 90. | 35 | 654.169 |
| Wicomico | 1 | 2.125 | .... | ..... | .... | ..... | 3 | 30. | 2 | 15. | .... | ..... | 8 | 101. | 2 | 40. | 8 | 58. | 4 | 17.50 | 28 | 263.625 |
| Totals | 28 | 90.384 | 4 | 12.33 | 11 | 14.50 | 14 | 128.75 | 17 | 141.50 | 26 | 156. | 98 | 1,091.33 | 128 | 5,598.75 | 39 | 467.25 | 37 | 290.75 | 402 | 7,991.544 |

## EXHIBIT L

### SUMMARY OF LEASING STATISTICS TO DECEMBER 31, 1915

| Counties | Leases Granted | | Leases Canceled | | Leases in Good Standing | |
|---|---|---|---|---|---|---|
| | Number | Acres | Number | Acres | Number | Acres |
| Anne Arundel | 113 | 2,175.356 | 41 | 278.886 | 72 | 1,896.47 |
| Charles | 31 | 211.40 | 12 | 51.15 | 19 | 160.25 |
| Calvert | 122 | 1,039.28 | 61 | 263.53 | 61 | 775.75 |
| Dorchester | 116 | 663. | 76 | 361.05 | 40 | 301.95 |
| Kent | 1 | 5. | 1 | 5. | .... | ..... |
| Queen Anne's | 7 | 27.14 | 6 | 22.39 | 1 | 4.75 |
| Somerset | 313 | 4,430.375 | 242 | 1,418.875 | 71 | 3,011.50 |
| St. Mary's | 103 | 1,024.413 | 28 | 101.333 | 75 | 923.08 |
| Talbot | 79 | 828.60 | 44 | 174.431 | 35 | 654.169 |
| Wicomico | 58 | 470.625 | 30 | 207. | 28 | 263.625 |
| Totals | 943 | 10,875.189 | 541 | 2,883.645 | 402 | 7,991.544 |

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